P.S
THE PREVENTIVE MAINTENANCE MONTHLY
Issue 34 1955 Series
"INVENTORY"
SNL
I'VE BEEN SHORTSHAFTED . . .

A PRIVATE

MIRACLE

Not many people
make silk purses
out of sows' ears
these days—
but you can perform a little
miracle all your own.
How? Why, by doing
the right kind of maintenance
on your Army equipment—
whether it's
a rifle,
tank,
truck,
dozer
or whatever.
(Just in case you may not know
exactly what to do and how—
just give your
ol' TM or FM the glad-eye.
There's one for
whatever equipment you've got.
Ask your sergeant.)
Keep'er slick, keep'er clean,
keep'er lubed, keep'er adjusted
and working right—
and your equipment'll
pay big dividends
like more cash in your pocket
(no statement-of-charges),
or maybe bring you through
rough weather and
rougher terrain, or maybe even
keep you alive and kicking
when things really bust loose.
Sure 'nuff—your own miracle.

PS MAGAZINE

Issue No. 34 — 1955 Series

Published by the Department of the Army for the information of organizational maintenance and supply personnel. Distribution is made through normal publication channels. Within limitations of availability, older issues may be obtained direct from Preventive Maintenance Agency, Raritan Arsenal, Metuchen, New Jersey.

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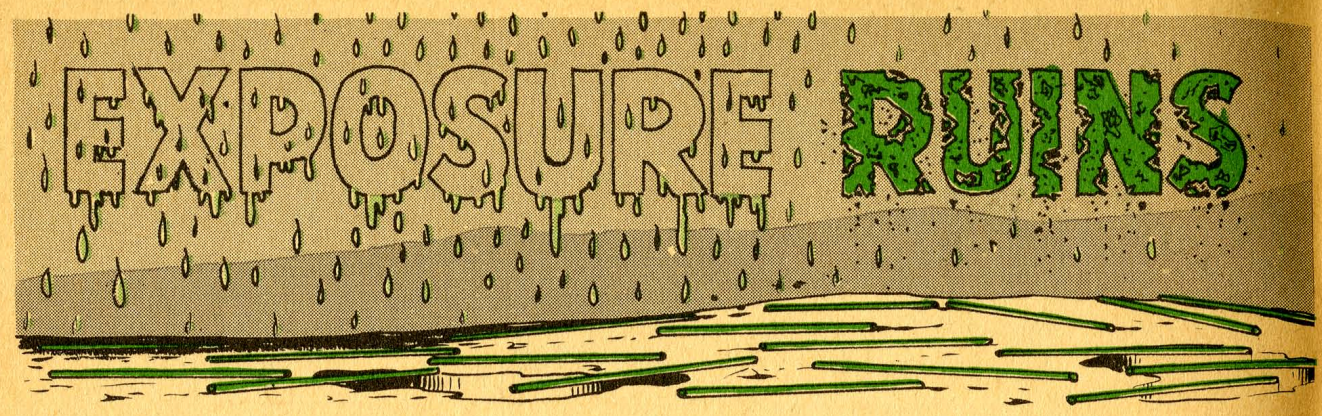
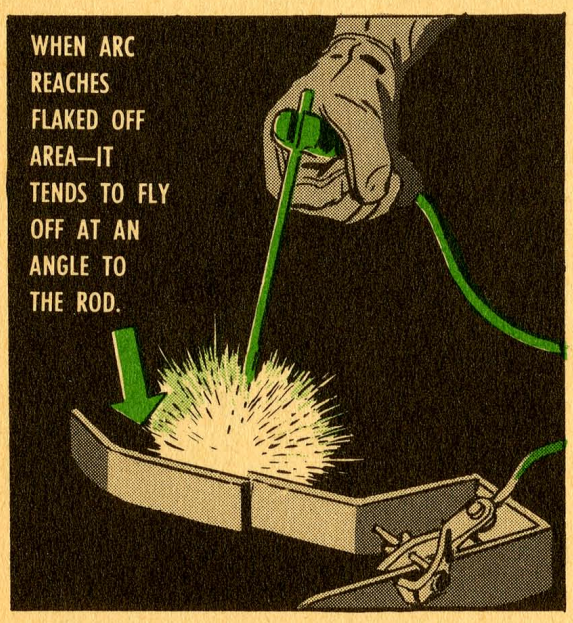


Electric welding rod, of course.

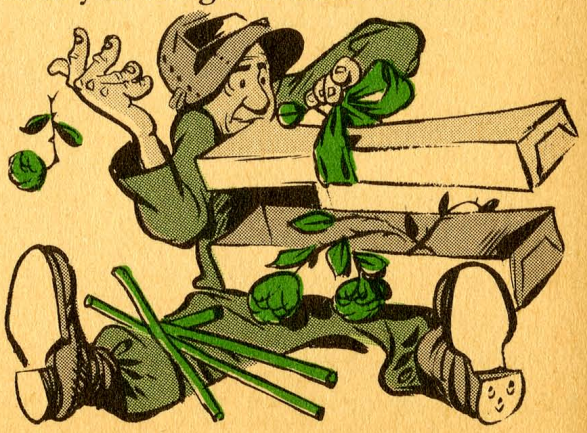
It's a fact, the boss welder of all time couldn't do a good job with rod that has been exposed to moisture.

Once the flux gets wet, it never dries quite right, and it flakes off while you're welding. In the first place, when your arc gets back to the flaked off area it tends to fly off at an angle to the rod, and it's darned hard to handle, especially if your training has all been on fluxed rods.

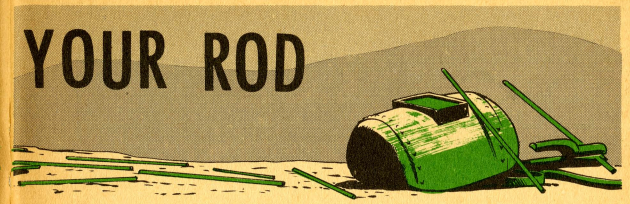


Also, in the absence of the protective flux gases over the arc and the molten flux over the bead, your weld picks up nitrogen from the air like crazy, and is likely to be hard and brittle. None of this is good for your weld, or for your pride and reputation as a welder.

But the answer is real simple: Only open **one** of the 50-lb tins of wire at a time, that is one of each type you stock and use where you are working. Also build a dry-box for your open-stock of rods. This dry-box can be any sort of a cabinet that suits your fancy and whatever you can get to make it out of.



EXPOSURE RUINS YOUR ROD



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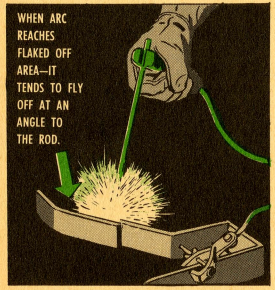

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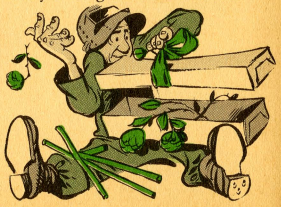
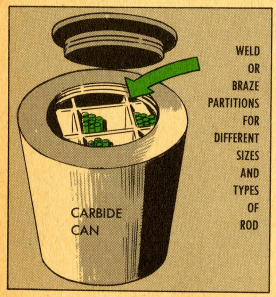
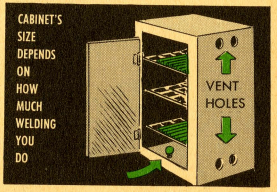


How you keep it dry depends on whether you're in a traveling shop or a fixed installation. For the traveling boys, you've gotta do the best you can to seal the rod up. A carefully opened carbide can makes a good rod box, particularly if you weld or braze a set of partitions into it to separate your different sizes and types of rod. Be sure you keep it sealed up when you're not using it. A couple of good dry silica gel bags inside will help.



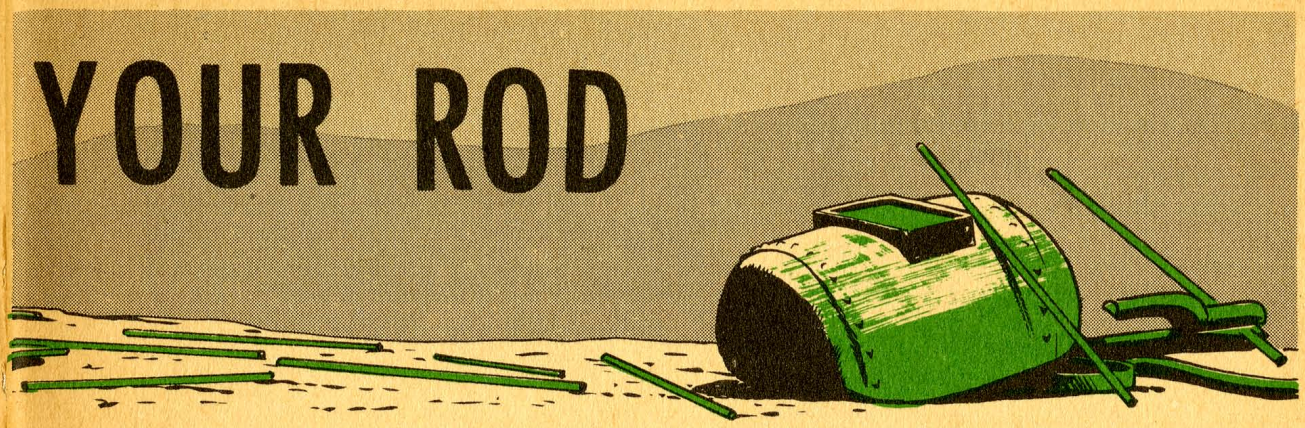
But if you're in a fixed shop with regular electric current, your best bet is a ventilated cabinet with an electric light bulb in the bottom and some way for the water vapors to get out at the top. Such a cabinet can be as large or as small as you need, according to how much welding you do.



You don't need a big bulb burning, a 25-watt bulb will take care of a small cabinet, and 60- to 100-watt is plenty for a big cabinet. And never let anyone kid you—the savings in rod will far outrun the cost of any current you use. Not to mention the peace of mind you get from knowing that when you weld in a critical place your weld won't fail.

Now don't go overboard on this matter of heat, because you can also spoil the flux on the Exx10 type rod by getting it too dry. Your box should average about 10° warmer than the surrounding air, and should not get more than 20° warmer. So ya see, ya don't need big bulbs.

YOUR ROD



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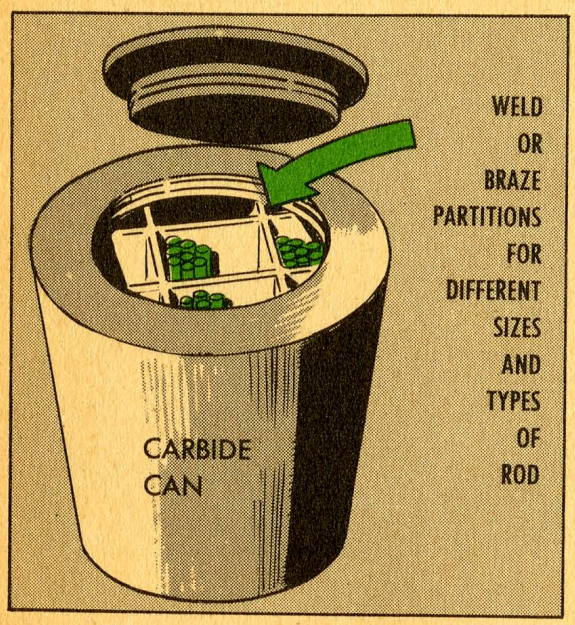

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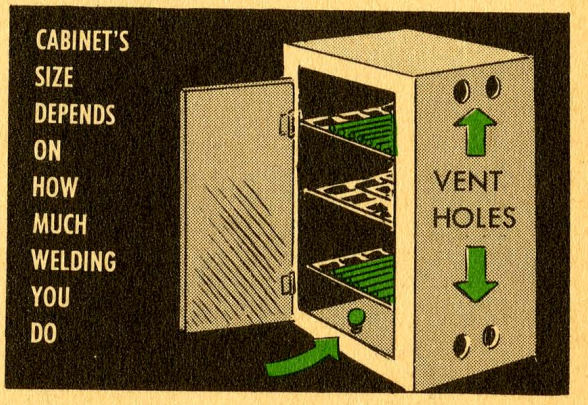

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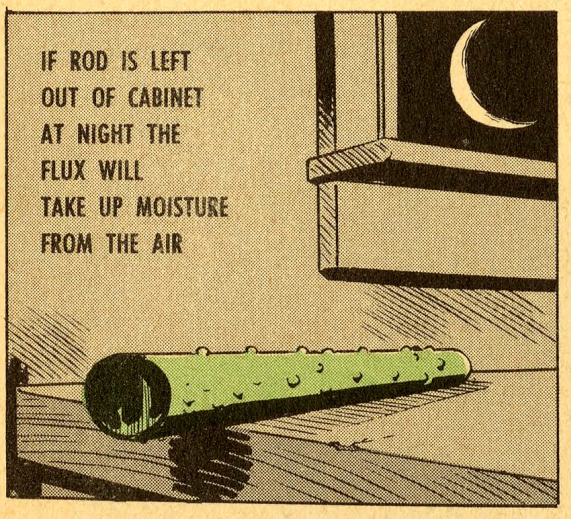
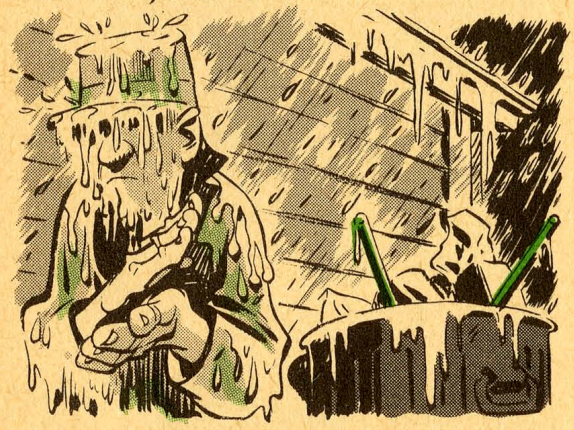
KEEP IT DRY

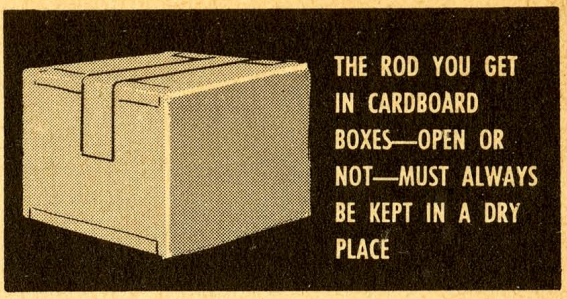
Unless the atmosphere is wringing wet, your rod is OK if it stands out during the working day and you store it in the cabinet at night. But if you leave it out at the welding bench day and night, it won't be long until it starts to fail, even though no water actually touches it. The flux takes up moisture from the air and begins to deteriorate.



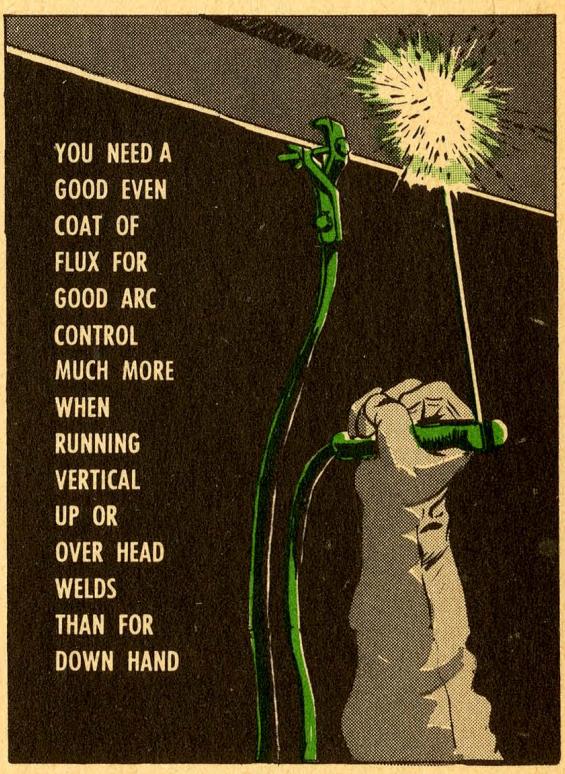
If your rod ever gets really wet, from rain, for example, the best you can do with it is junk it.



Everything said about open tins of rod goes double for rod you get in cardboard boxes, whether open or not. These must always be kept in a dry place or they'll be ruined.



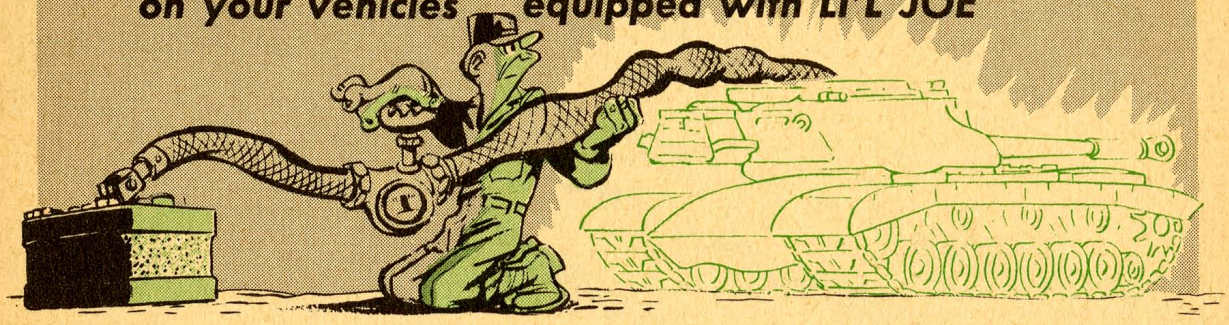
Of all the rods, the most sensitive to wet flux troubles are low hydrogen types, or your reverse-polarity all-position rods, the Exx10 series. This is not only due to the nature of the fluxes used on these rods, but also because of difficult welding positions you tangle with.



If you get a batch of spoiled rod when you have much out-of-position work to do, get rid of it, especially if your work is anyways critical, like ballistic welding on tank hulls, or pressure vessel work of any type. It isn't fair to you as a welder, or to the men who will depend on your work to use a doubtful rod.

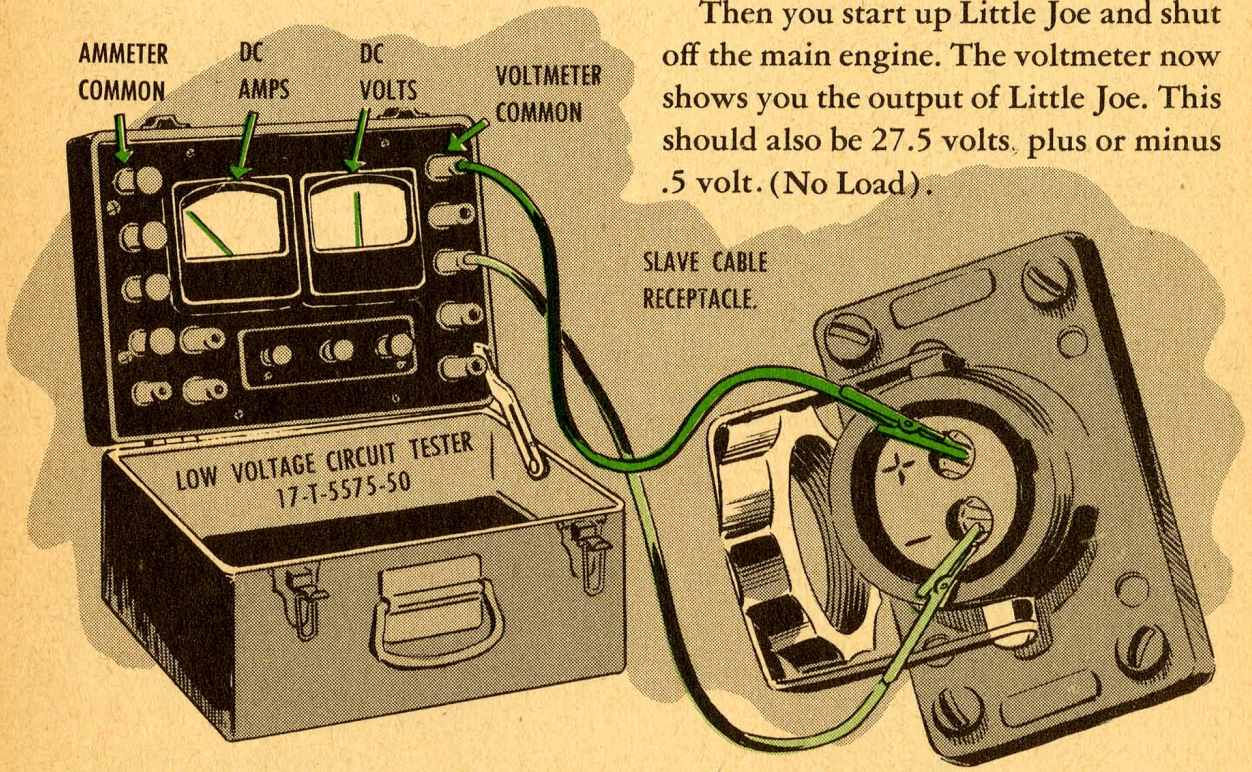
ADJUST THE JUICE

on your vehicles equipped with LI'L JOE



Any time you have troubles such as low batteries and hard starting on your track vehicles, it's a good idea to check the generator output voltages.

All you need is the Low Voltage Circuit Tester, 17-T-5575-50, or any other voltmeter with 30 volts capacity.



You first warm up both the main engine and Little Joe for at least 45 minutes. (Smart men catch the tanks when both engines have been running for some other purpose.)

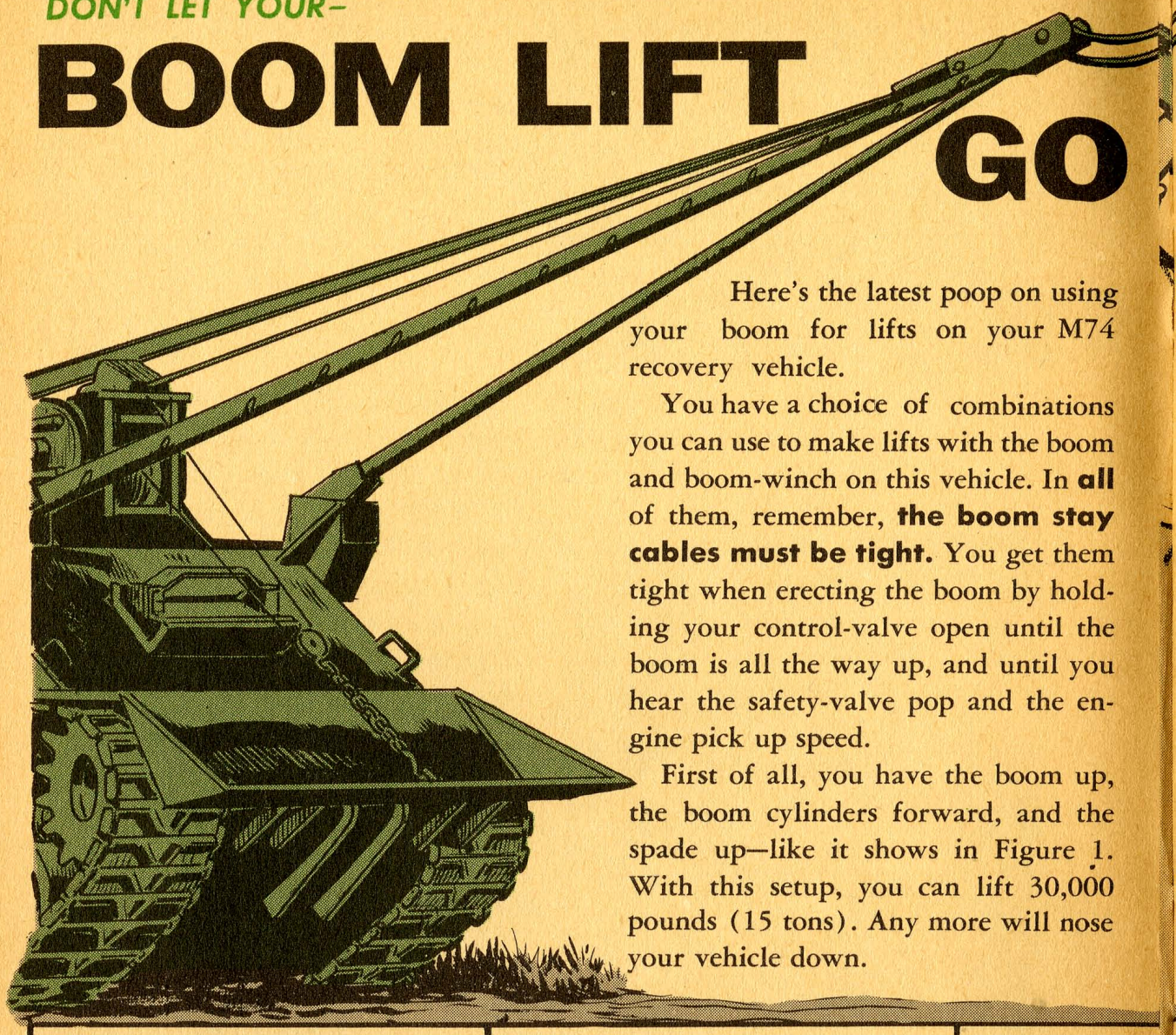
Then you stop Little Joe, hook your voltmeter to the slave cable receptacle, and run the main engine at about 1500-RPM. The reading you get on the voltmeter is the output voltage of the main-engine generator. This should be 27.5 volts plus or minus .5 volt. (No Load).

Then you start up Little Joe and shut off the main engine. The voltmeter now shows you the output of Little Joe. This should also be 27.5 volts plus or minus .5 volt. (No Load).

If either of these voltages is off, send the tank to Ordnance to have it adjusted, or get an Ordnanceman to come to you. Tell him which generator is off, and how much.

DON'T LET YOUR–

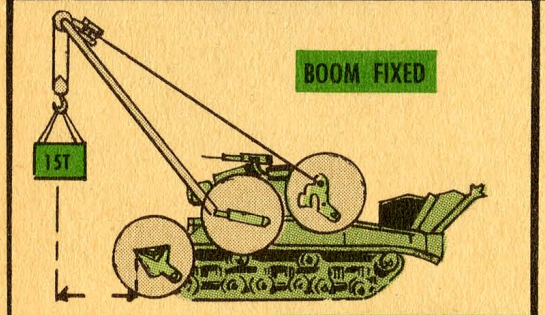
BOOM LIFT GO



Here's the latest poop on using your boom for lifts on your M74 recovery vehicle.

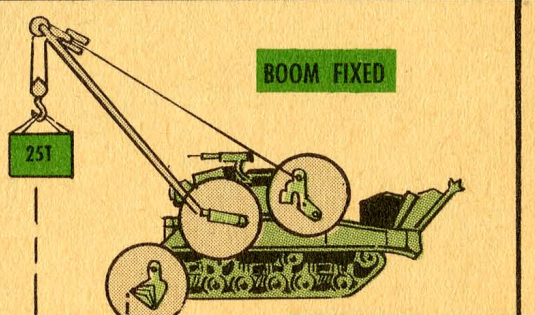
You have a choice of combinations you can use to make lifts with the boom and boom-winch on this vehicle. In **all** of them, remember, **the boom stay cables must be tight.** You get them tight when erecting the boom by holding your control-valve open until the boom is all the way up, and until you hear the safety-valve pop and the engine pick up speed.

First of all, you have the boom up, the boom cylinders forward, and the spade up—like it shows in Figure 1. With this setup, you can lift 30,000 pounds (15 tons). Any more will nose your vehicle down.



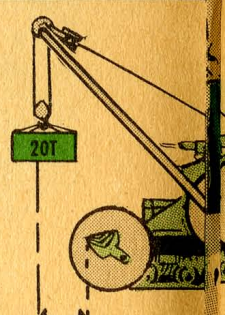
MAXIMUM LIFT – 30,000 LBS.

Fig 1



MAXIMUM LIFT – 50,000 LBS

Fig 2



MAXIMUM LIFT –

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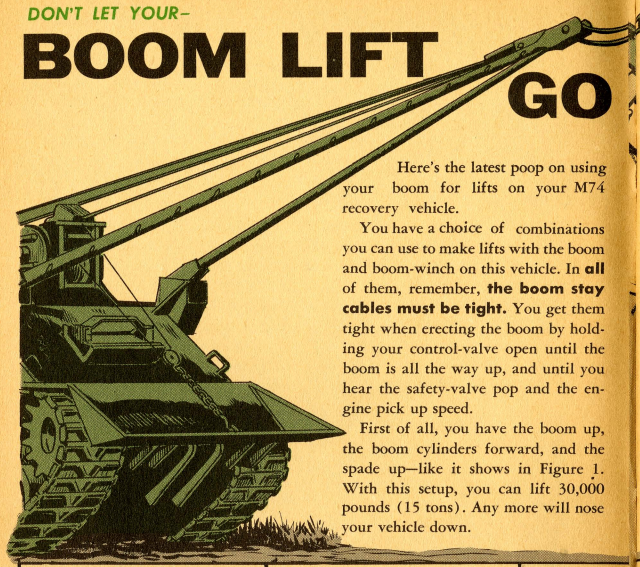

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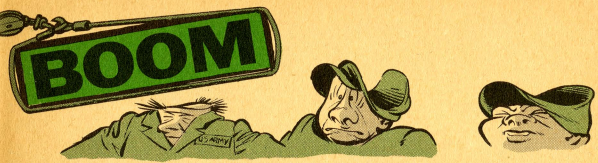


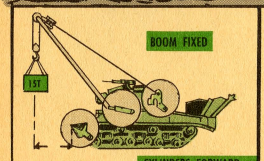
Now, Figure 2 is the same thing with the spade down. With this setup, your capacity is increased to 50,000 pounds or 25 tons and you'll get greater clearance for your load, because the forward edge of the spade is closer to the vehicle.

In Figure 3, you have the spade up, but the boom cylinders are turned back and pinned to the crank arms, and the boom is then retracted. Watch this one —it's tricky. With the boom pulled **back** so the load is closer to the retriever, you can lift 40,000 pounds or 20 tons. **But,** if you want to use your boom cylinders to shift the boom and the load forward and back, like installing a turret or a power pack, then you can only lift the 15 tons like in Figure 4. So be sure you know how heavy your lift is going to be.

If the lift is over 15 tons, or if you don't know just how heavy it is, take the time to put your spade down before lifting.

This puts you into a setup like in Figure 5, where you can lift 50,000 pounds or 25 tons, just like in Figure 2. Now hear this, in this condition with the spade down and the cylinders turned back to the crank arms, you **are safe** to use the boom cylinders to move a maximum load, 25 tons, back and forth through the whole range of the live-boom travel.

The centerline of your hook will move from 97 inches in front of the spade back to 50 inches in front of the spade. You use this travel for spotting your load where you need it.



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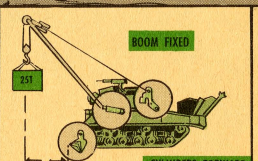
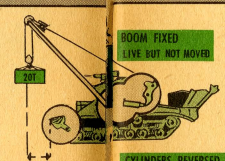


MAXIMUM LIFT – 50,000 LBS

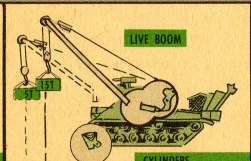
Fig 2



MAXIMUM LIFT –

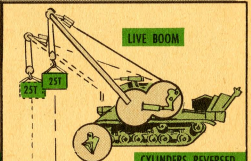
40,000 LBS

Fig 3



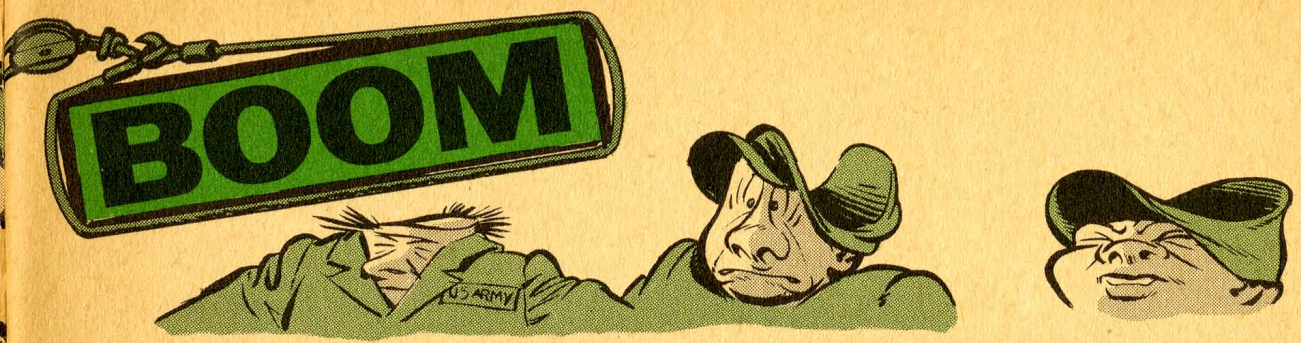
MAXIMUM LIFT – 30,000 LBS

Fig 4



MAXIMUM LIFT – 50,000 LBS

Fig 5



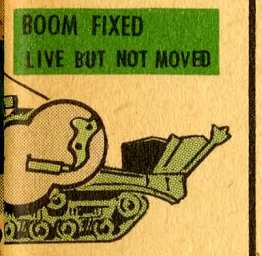
Now, Figure 2 is the same thing with the spade down. With this setup, your capacity is increased to 50,000 pounds or 25 tons and you'll get greater clearance for your load, because the forward edge of the spade is closer to the vehicle.

In Figure 3, you have the spade up, but the boom cylinders are turned back and pinned to the crank arms, and the boom is then retracted. Watch this one —it's tricky. With the boom pulled **back** so the load is closer to the retriever, you can lift 40,000 pounds or 20 tons. **But**, if you want to use your boom cylinders to shift the boom and the load forward and back, like installing a turret or a power pack, then you can only lift the 15 tons like in Figure 4. So be sure you know how heavy your lift is going to be.

If the lift is over 15 tons, or if you don't know just how heavy it is, take the time to put your spade down before lifting.

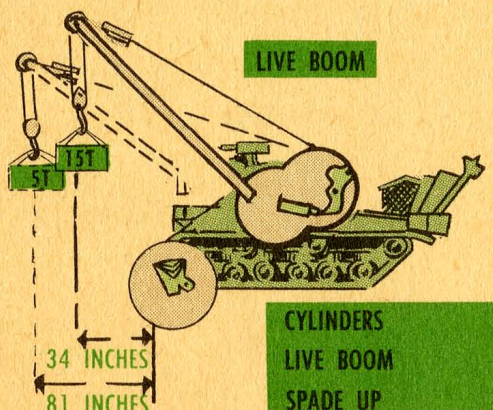
This puts you into a setup like in Figure 5, where you can lift 50,000 pounds or 25 tons, just like in Figure 2. Now hear this, in this condition with the spade down and the cylinders turned back to the crank arms, you **are safe** to use the boom cylinders to move a maximum load, 25 tons, back and forth through the whole range of the live-boom travel.

The centerline of your hook will move from 97 inches in front of the spade back to 50 inches in front of the spade. You use this travel for spotting your load where you need it.



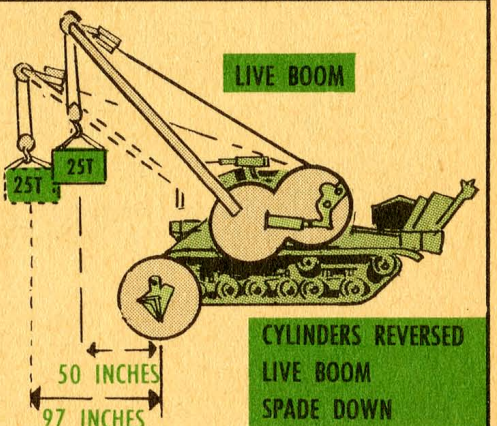
40,000 LBS

Fig 3



MAXIMUM LIFT — 30,000 LBS

Fig 4



MAXIMUM LIFT — 50,000 LBS

Fig 5

KEEP YOUR R

With this new-fangled lasso

As you RCAT men know, the later 'cats (made after May 1954) have a lanyard that keeps the wing and fuselage tied together if the shear-bolt breaks in a landing. This'll let the flotation of the wing help support the fuselage if your 'cat lands in water.

Any of you who're flying the older targets near or over water can install one of these and bring your 'cat up to date. It might save a fuselage and engine some day.

You'll need:

1. ONE AN 23-10A BOLT, (TC-AIR ITEM) AIR FORCE STOCK NO. 6500-080000
2. ONE CLAMP, ELECTRICAL, LOOP TYPE, CUSHIONED, S, CADMIUM OR ZINC PLATED, 1/2-IN OD TUBE SIZE, WITH HOLE FOR—
3. NUMBER 10 SCREW ORD STOCK NO. H004-0572904
4. ONE CLAMP, ELECTRICAL, LOOP TYPE, CUSHIONED, S, CADMIUM OR ZINC PLATED, 1/2-IN OD TUBE SIZE, WITH HOLE FOR—
5. 3/8-IN BOLT ENG STOCK NO. 17-3049.600.051.
6. SIX FEET OF NYLON SHROUD LINE FROM A SALVAGED PARACHUTE (UNSERVICEABLE AND UNECONOMICALLY REPARABLE).

KEEP YOUR RCAT AFLOAT

With this new-fangled lasso for the wing and fuselage

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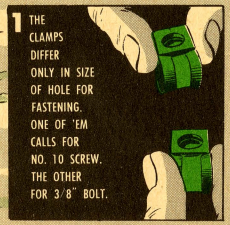
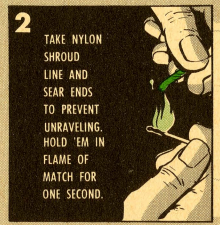
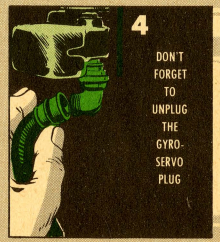


1 THE CLAMPS DIFFER ONLY IN SIZE OF HOLE FOR FASTENING. ONE OF 'EM CALLS FOR NO. 10 SCREW. THE OTHER FOR 3/8" BOLT.



2 TAKE NYLON SHROUD LINE AND SEAR ENDS TO PREVENT UNRAVELING. HOLD 'EM IN FLAME OF MATCH FOR ONE SECOND.

3 TAKE OFF HORSE COLLAR WING FAIRING AND REMOVE WING BY TAKING OUT SHEAR BOLT.



4 DON'T FORGET TO UNPLUG THE GYRO-SERVO PLUG

CAT AFLOAT

for the wing and fuselage

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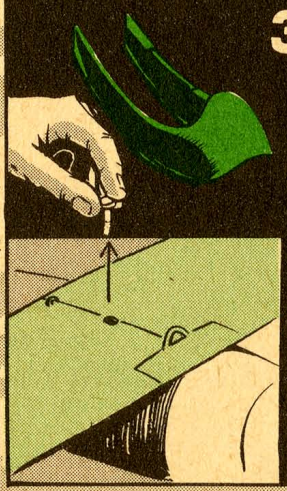

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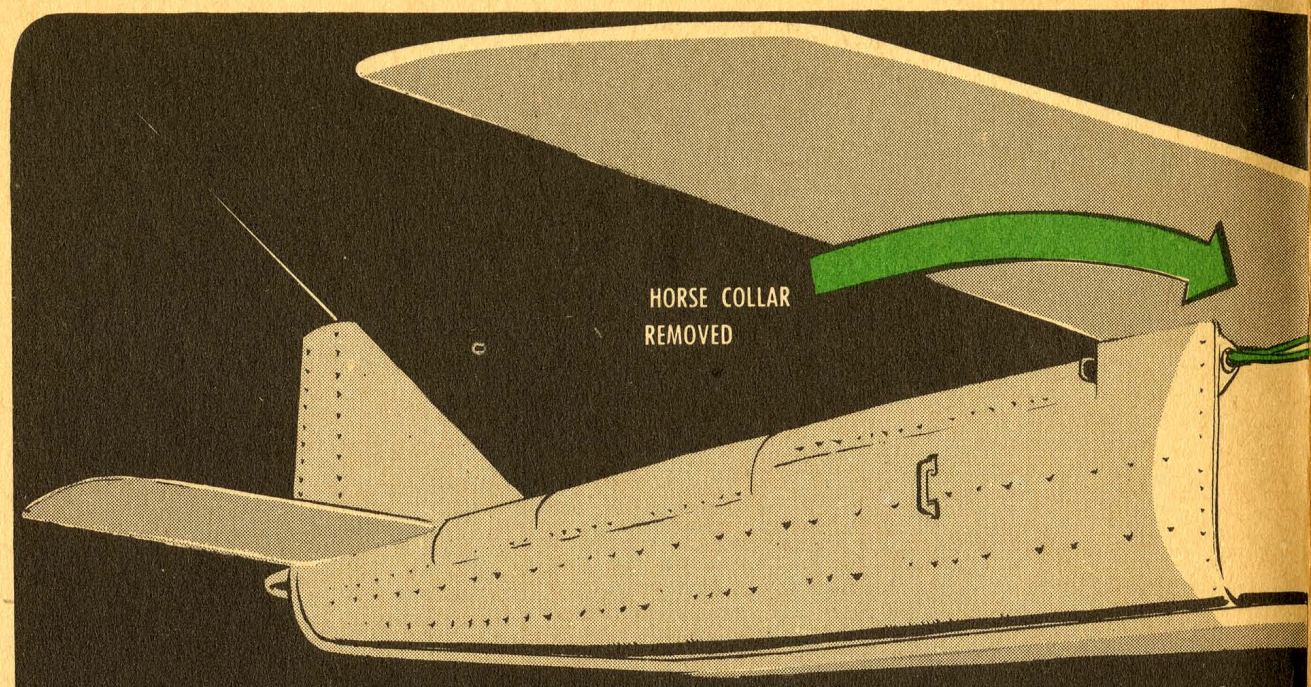
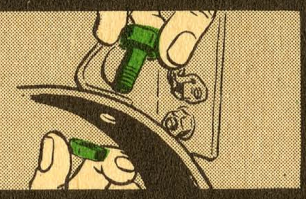


6 REMOVE AN23-8A BOLT WHICH HOLDS RIGHT HAND FORMER ASSEMBLY TO FUSELAGE (LOOKING FROM TAIL TO ENGINE)



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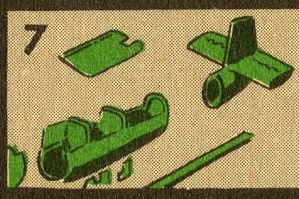
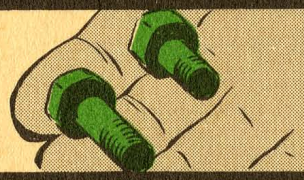


CONSULT MAINTENANCE AND ERECTION HANDBOOK AN28-10C-27 (1 APR 52) FIG 4-5 INDEX NOS. 24, 27, 28

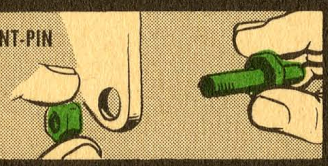
8



REPLACE SHORT AN23-8A BOLT WITH LONGER AN23-10A BOLT.

9 INSTALL CUSHION-CLAMP WITH 3/8" HOLE ON IT REPLACING WASHER AND NUT.

10 TAKE OUT WING-ATTACHMENT-PIN FROM RIGHT-HAND SIDE OF SPLICE-PLATE.



11

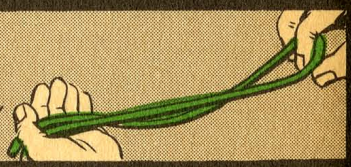
LOOK AT HANDBOOK FIG 4-1 INDEX NOS. 7, 8 AND 10. DISCARD WASHER.

12

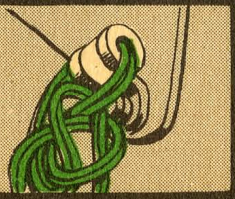
INSTALL OTHER CUSHIONED CLAMP IN PLACE OF IT. THIS CLAMP GOES ON REAR OF SPLICE PLATE.

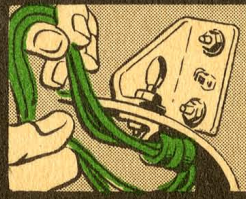
RUN NUT UP— BUT DON'T TIGHTEN

13 DOUBLE NYLON LINE TO MAKE A TWO-CORD 36" CORD.

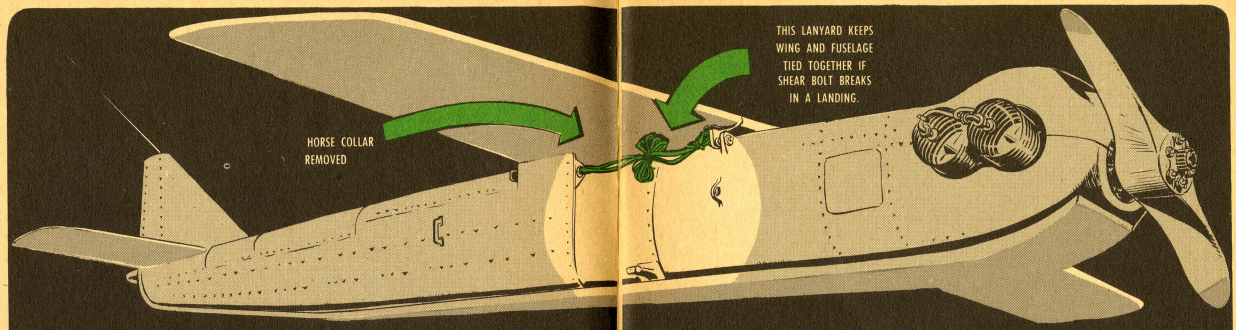


14 LOOP ONE END THROUGH CLAMP UNDER FORMER ASSEMBLY AND TIE IT IN A BOWLINE KNOT.





15 OTHER END IS THREADED THROUGH CLAMP ON SPLICE PLATE AS YOU BRING THE WING INTO PLACE OVER FUSELAGE AND IS ALSO TIED.



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15 OTHER END IS THREADED THROUGH CLAMP ON SPLICE PLATE AS YOU BRING THE WING INTO PLACE OVER FUSELAGE AND IS ALSO TIED.

16 LOWER WING AND POSITION ATTACHMENT PINS IN THE LUGS.

17 DON'T INSTALL SHEAR BOLT UNTIL YOU HAVE ADJUSTED CLAMP ON SPLICE PLATE SO THAT IT DOESN'T INTERFERE WITH THE FUSELAGE OR WING FAIRING, AND THEN YOU TIGHTEN THE NUT HOLDING THE CLAMP.

18 LOOP UP THE SLACK IN THE LANYARD AND PUT A RUBBER BAND ON IT.

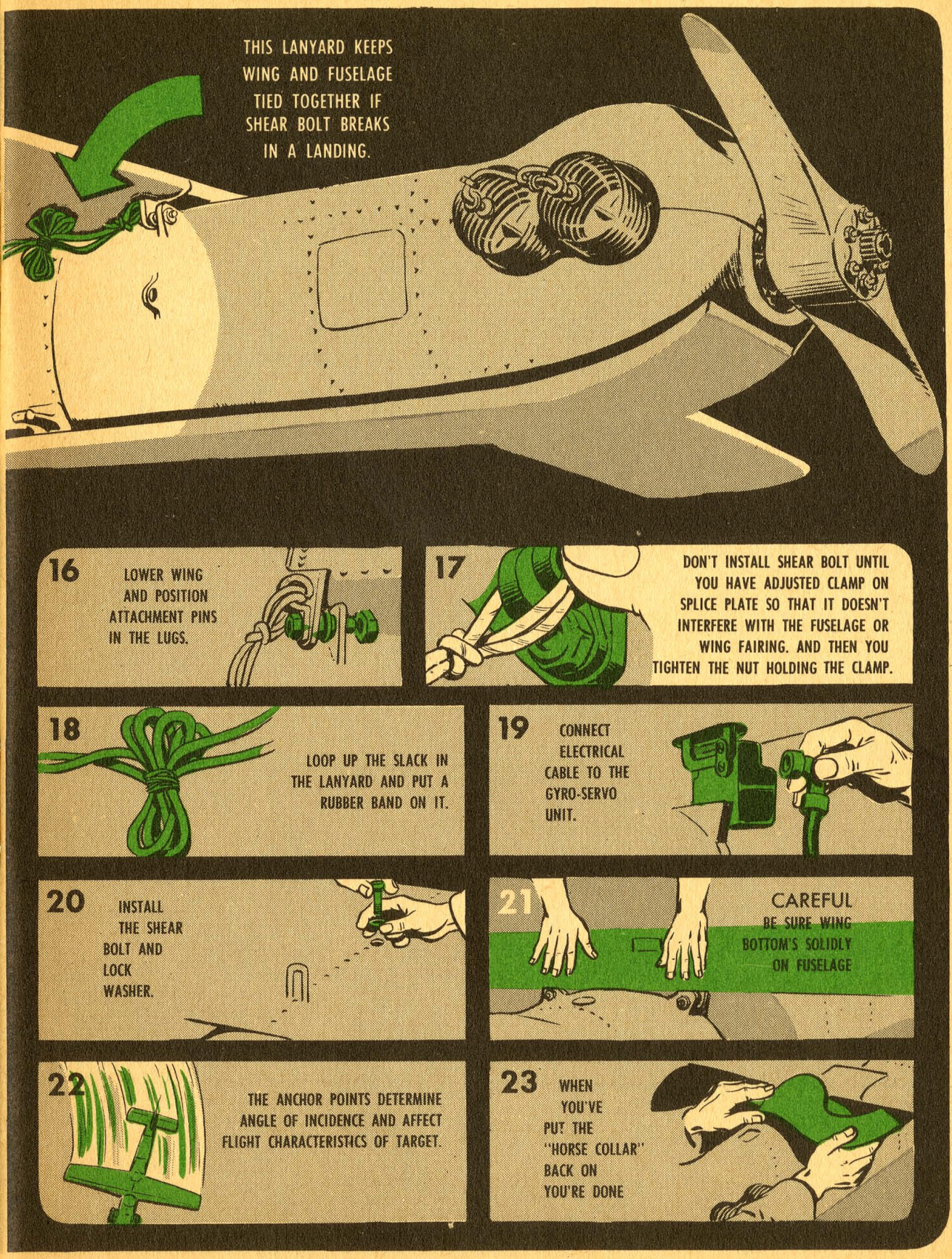
19 CONNECT ELECTRICAL CABLE TO THE GYRO-SERVO UNIT.

20 INSTALL THE SHEAR BOLT AND LOCK WASHER.

21 CAREFUL
BE SURE WING BOTTOM'S SOLIDLY ON FUSELAGE

22 THE ANCHOR POINTS DETERMINE ANGLE OF INCIDENCE AND AFFECT FLIGHT CHARACTERISTICS OF TARGET.

23 WHEN YOU'VE PUT THE "HORSE COLLAR" BACK ON YOU'RE DONE


THIS LANYARD KEEPS WING AND FUSELAGE TIED TOGETHER IF SHEAR BOLT BREAKS IN A LANDING.
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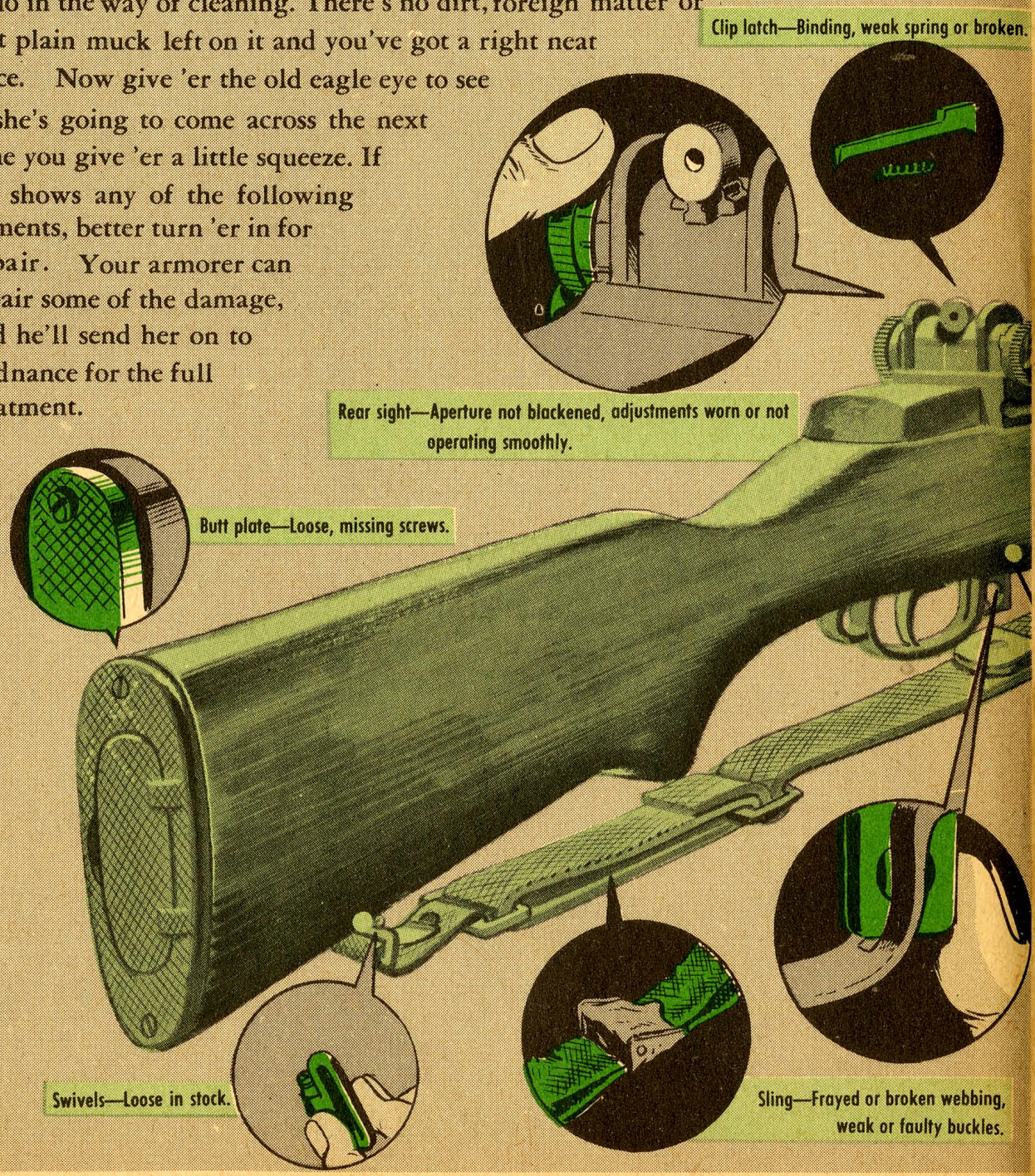
M1 Riflemen . . . THIS LITTLE GAME'LL MAKE

CHECK YOUR M1 RIFLE FOR THESE

Here's a little game you can play with your weapon that'll help make you a ready-teddy when the chips are down.

Suppose you've done everything to your weapon that you're supposed to do in the way of cleaning. There's no dirt, foreign matter or just plain muck left on it and you've got a right neat piece. Now give 'er the old eagle eye to see if she's going to come across the next time you give 'er a little squeeze. If she shows any of the following ailments, better turn 'er in for repair. Your armorer can repair some of the damage, and he'll send her on to Ordnance for the full treatment.



M1 Riflemen... THIS LITTLE GAME'LL MAKE FOR A SURE WEAPON

CHECK YOUR M1 RIFLE FOR THESE ACHES AND PAINS:

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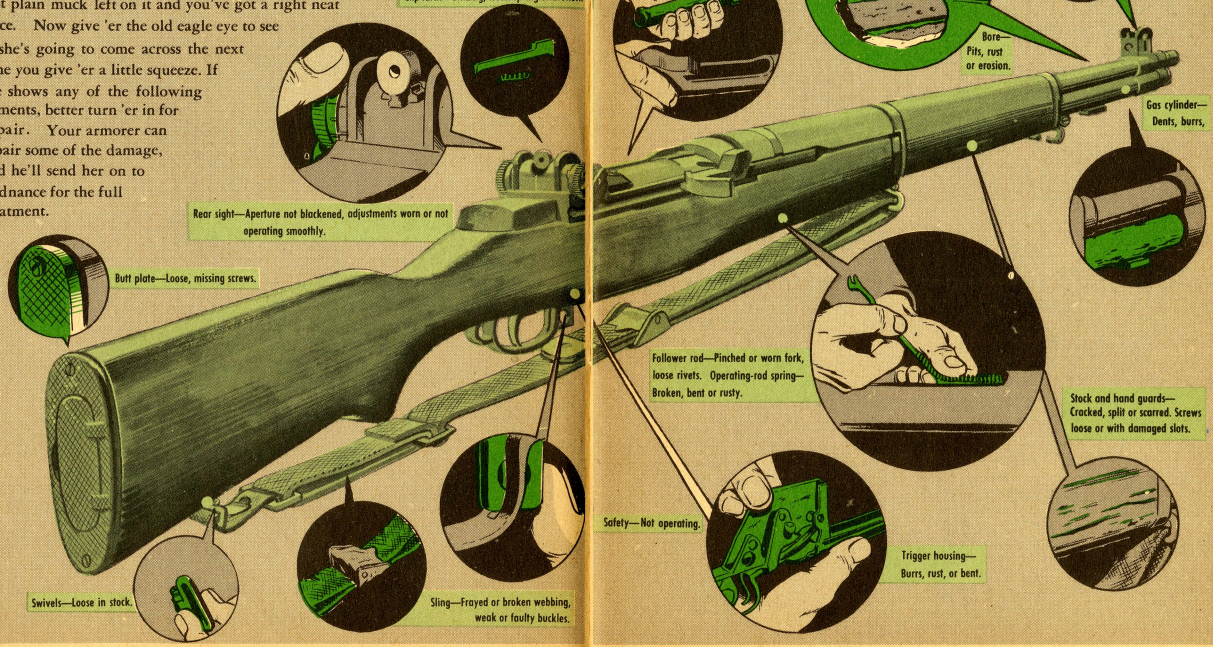
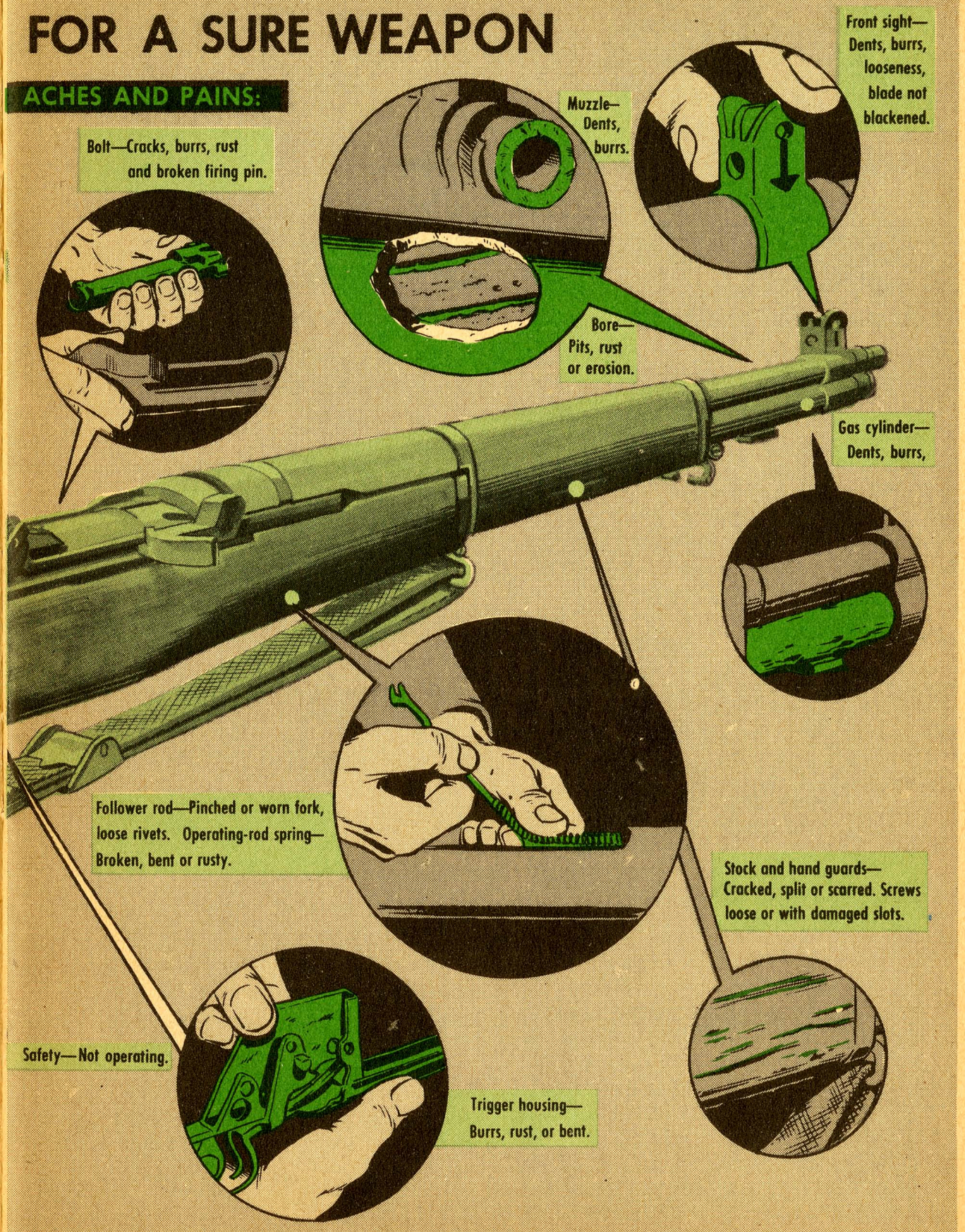
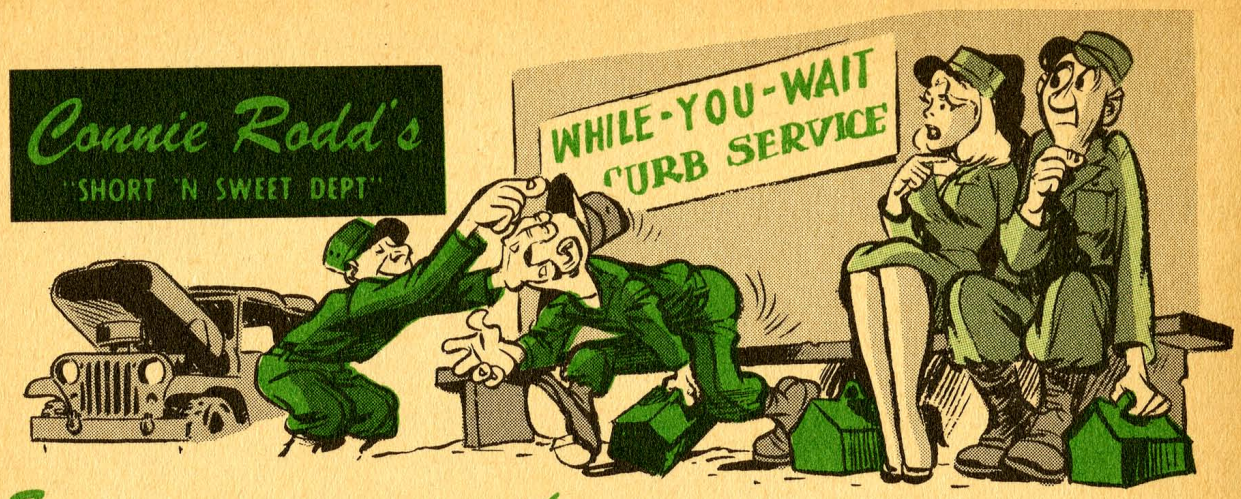


FOR A SURE WEAPON

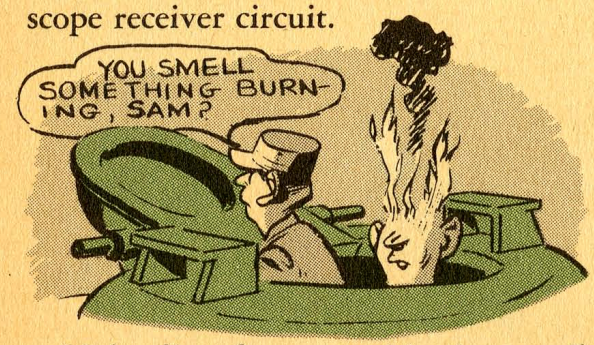
ACHES AND PAINS:



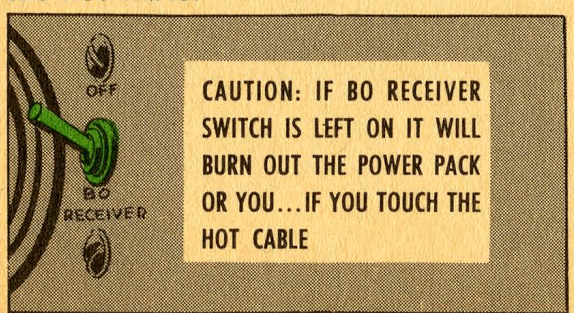


Save your ir power-pack (and yourself)

That BO (black-out receiver switch) on the instrument panel of your battle-buggy can be even more re-**volt**-in' than the soap-ad variety—unless you're careful. On most combat vehicles this switch is now wired to control the 16,000-volt infra-red (black-out) periscope receiver circuit.



Make ding-dong sure it's always off when the scope's not in actual use. Left on, it'll burn out the power pack—or maybe burn your hide, should y'touch the hot cable.



And make certain that high-voltage plug on the cable's always secured to the dummy receptacle when outta the scope. Better be safe.

Double track wire

Some of you have been wondering why there are three wires in the cable from your generator to the regulator on transport vehicles having 25-amp generating systems. True, the only circuits in this cable are the generator output—running to the regulator and then the battery, and the field input—running back to the generator from the regulator.

But, that generator has a big output, sometimes as high as 30 amperes, so they are using two leads in parallel to carry it back to the regulator. You see, the type of cable and connectors used here were already standard items when this system was designed, and rather than wait to set up machinery to make a two wire cable with one heavy wire and one light one, they found it was faster and easier to use a three wire setup and divide the heavy load between two of the wires.

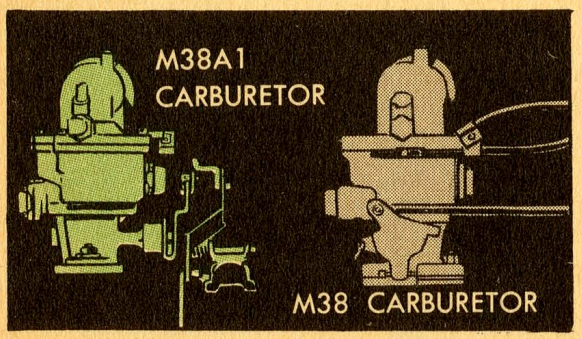
So, for gossakes, **don't** go taking out the third wire: It's needed.

The SNL blues

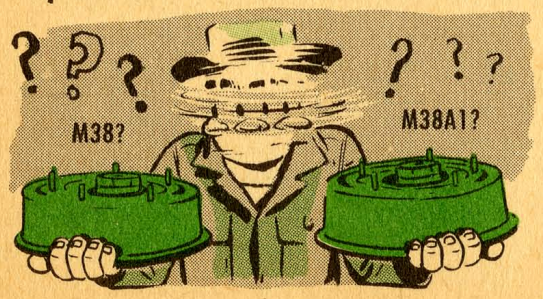
Been hearin' a lot of guys gripe 'bout gettin' wrong parts for their Jeep. Easy to understand why. When they order a part for their M38, they use the SNL for the M38A1, and vice-versa.

Sometimes it'll work, 'cause some parts are the same for both Jeeps. But there're many parts that are different too. So, with the wrong SNL, you might get the wrong part.

Take f'example the carburetors. They're as different as Marilyn Monroe and Lena the Hyena. When you put the M38 carburetor on the 'A1, or vice-versa, the passages won't line up, the throttle linkage controls are different, the mountings are different and the air horns are different.



Take another example. Puttin' a M38 wheel-cylinder and brake-shoe in an 'A1, or vice-versa, will cause nothing but trouble. The brake-drums of the two Jeeps are different.

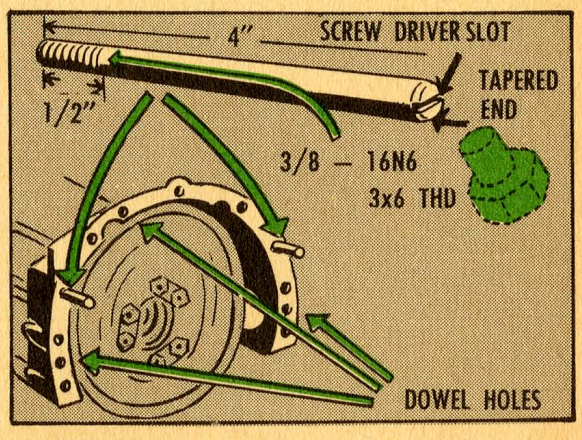


Which all boils down to one thing—use the right SNL to be sure. For the M38, SNL G-740 gives you the poop. The 'A1 Jeep uses SNL G-758 as its parts bible.

Studding transmissions

You can give yourself a helping hand by using alignment studs in the front half of the M133-series flywheel housings. It makes the transmission easier to install and'll lower the chance of transmission mainshaft and pilot bearing misalignment or damage.

You can make the studs out of screws (Ord Stock No. H101-0100142, H101-0109443 or H101-0110209). Cut the heads off the screws and cut a screwdriver slot in the top of the stud so you can install or remove the studs. Taper the studs at the slotted ends to make alignment easier.



Put the studs, one in the first or second holes to the left and one in the third hole to the right of the top front half of the flywheel housing dowel holes.

With the studs in place, the rear half of the flywheel housing will pilot them on, and you can align the flywheel dowels and bolts from underneath.

Over the hill—slanchways

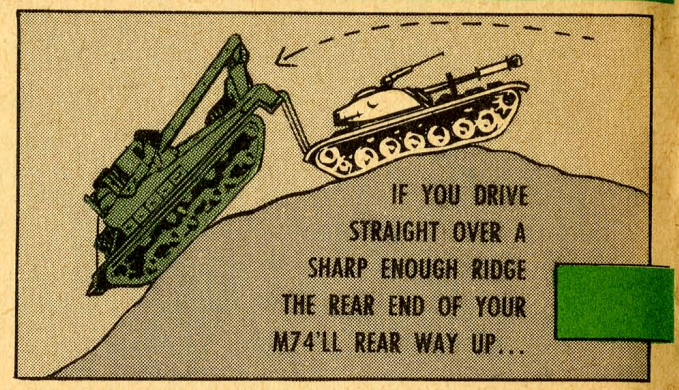
Comes a time when the best soldier in the world has to go over the hill. Like when you're towing a tank behind your M74 recovery vehicle, and your road home drops down into a steep gully.

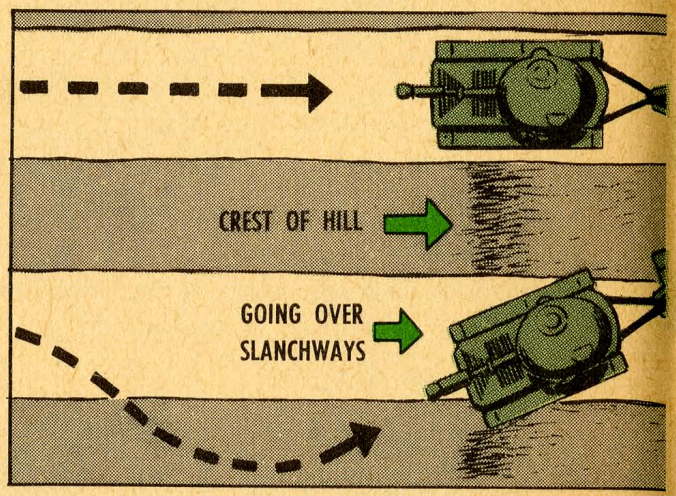
Well, if you've gotta go, you gotta. But, if you drive straight over a sharp enough ridge, the rear end of your M74'll rear way up when the nose starts down. It's possible for your tow to coast up under it and cock the tow bar so that you go down the hill with only part of your M74 track on the ground.

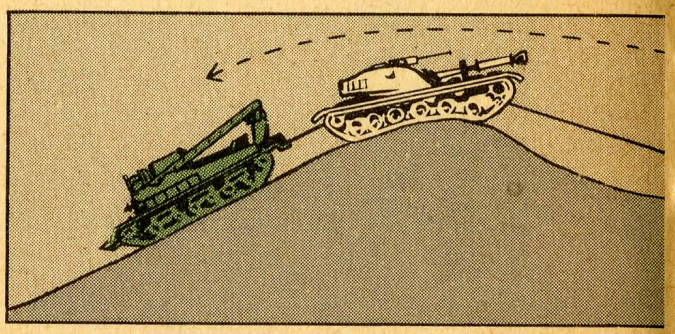
This, of course, can play hob with your control, and no telling what you'll run into.

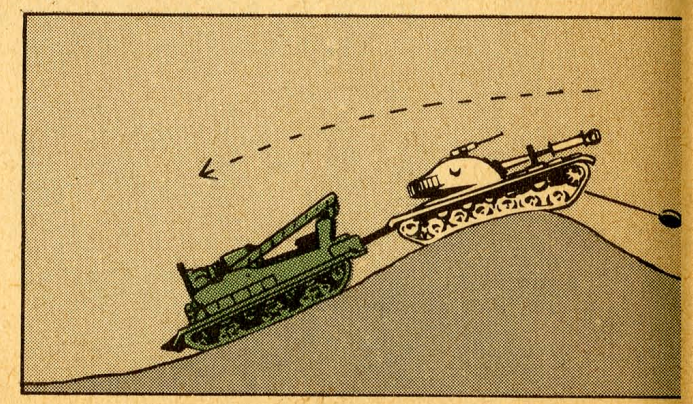
But, the answer is real simple—you don't go over the hump straight; you go over slanchways. Take just as long an angle over the hump as you can with the road you've got, but don't take so much that you tip your buggy over. In about 99 times out of 100, you'll find that you can angle over real nice.

If and when you do find one that you gotta go over straight, you can use another tank or M74 to hold your tow back, or use a two-part line on a winch truck, chock the towed tank with logs, or use a heavy rope snubbed on a tree. You don't have to hold back the tow when it's on the grade—just when it goes over the hump. Take it easy.









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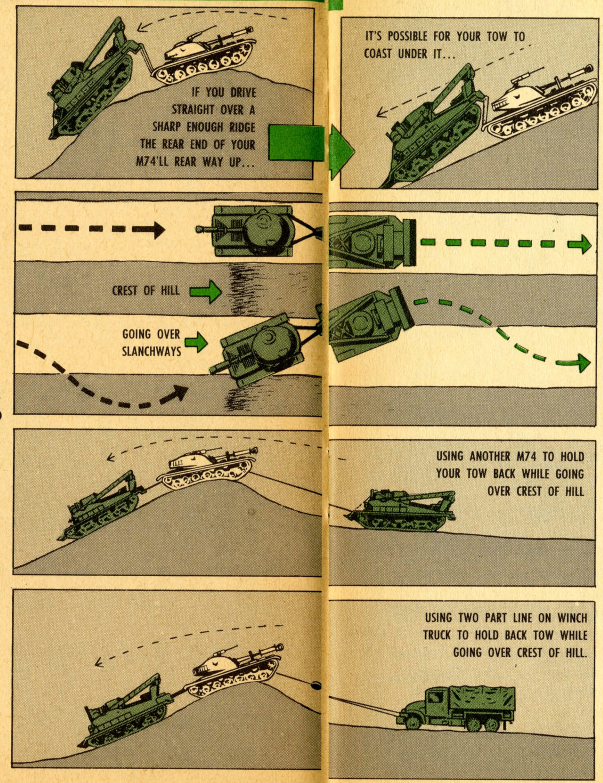
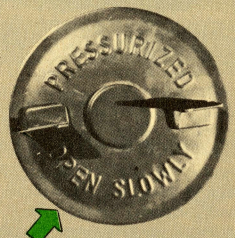
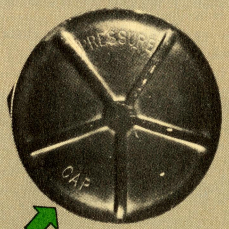


He who switches gas tank caps brings trouble into his back.

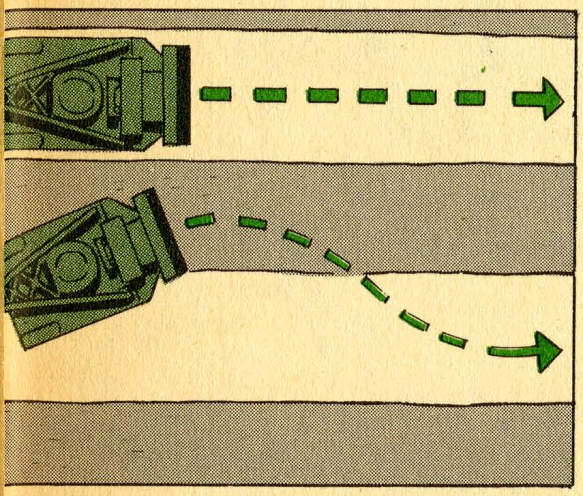


This cap for the M38, the 2½-ton Reos and the 5-tonners is air tight. The venting and pressure-relief valves are on the tank itself.



This cap is for the M38A1, the M37 Dodges and M133 series GMC's only. It has the pressure relief valve in the cap, and pressure'll build up in the tank and push gas all over if you use the other cap.

IT'S POSSIBLE FOR YOUR TOW TO COAST UNDER IT...



USING ANOTHER M74 TO HOLD YOUR TOW BACK WHILE GOING OVER CREST OF HILL

USING TWO PART LINE ON WINCH TRUCK TO HOLD BACK TOW WHILE GOING OVER CREST OF HILL.

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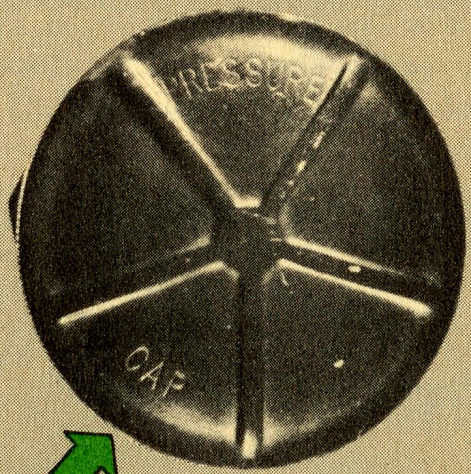

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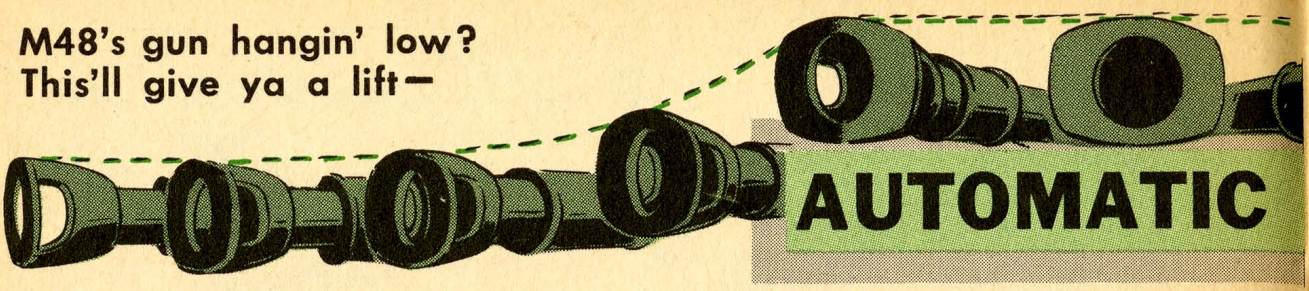
M48's gun hangin' low?
This'll give ya a lift—

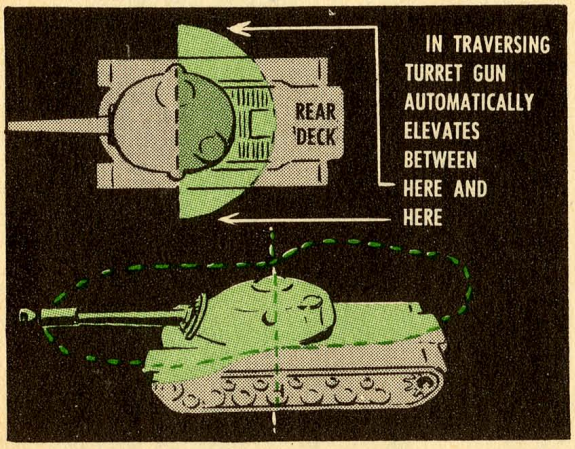


AUTOMATIC

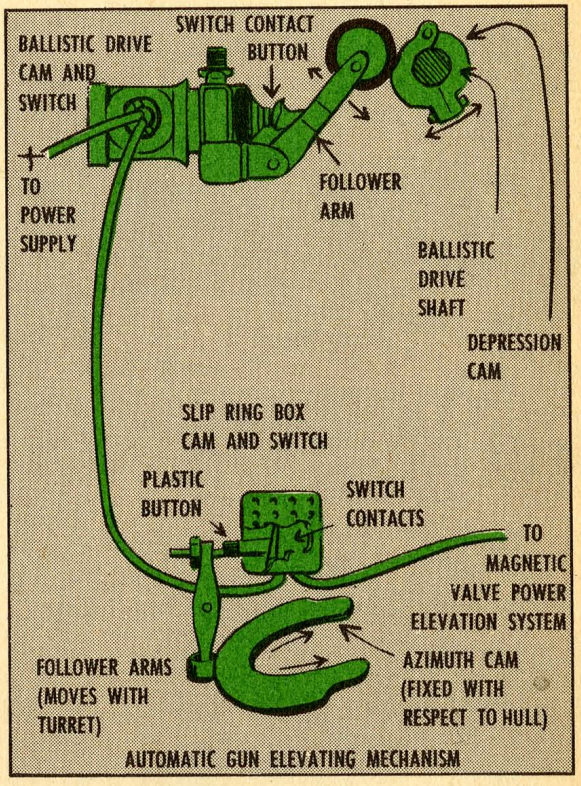
It goes without saying that all good tank commanders and gunners know better'n to smack their gun into the side of the tank or other objects while traversing. They just naturally elevate above the danger point before they slew 'er around.

However, just in case of a relapse in the thick of things, your M48 has an elevating mechanism which automatically lifts the gun when it is traversed over the rear deck. The system consists of two cam and switch combinations connected in series with a valve operated by a solenoid. One combination is located on the ballistic drive and the other is on the slip ring box.

The switch on the ballistic drive determines **when** the gun will elevate. It goes into action when the gun



goes below the interference setting. The cam and switch on the slip ring box determine **where** the gun will elevate. It gets all heated up when the gun approaches the rear deck and stays ready to go into action until the gun is clear of the obstruction area.



AUTOMATIC GUN ELEVATING MECHANISM

But **both** switches have to be closed at the same time before anything happens. So the only time the automatic lift operates is when the gun is depressed below the interference setting and is near or over the rear deck. Neat, huh?

To keep the system operating as it should, adjust her now and then, 'specially after dogging it over rough terrain.

M48's gun hangin' low?
This'll give ya a lift—

AUTOMATIC ELEVATOR

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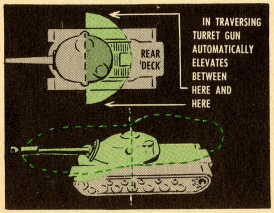

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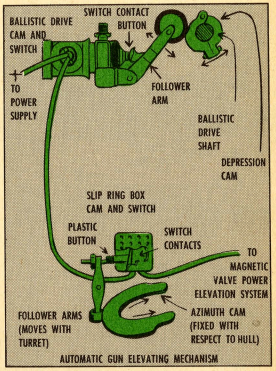

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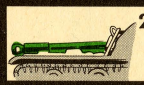
To keep the system operating as it should, adjust her now and then, 'specially after dogging it over rough terrain.

FOR INTERFERENCE SETTING

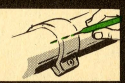
1 DISCONNECT WIRES OF SWITCH ON BALLISTIC DRIVE AND LOOSEN CAM SET SCREW.

2 WITH OBSERVER OUTSIDE OF TURRET TRAVERSE GUN OVER REAR DECK AT LOWEST POSSIBLE ELEVATION

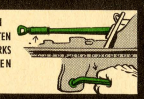


3 WITH GUN AT LOWEST POSSIBLE TRAVERSING ELEVATION, ROTATE CAM UNTIL SWITCH CLOSES. YOU'LL HEAR A LITTLE CLICK.

4 PENCIL OR PAINT MARK ON CAM AND ONE ON BALLISTIC DRIVE SO YOU CAN LINE 'EM UP LATER.



5 ELEVATE OR DEPRESS GUN FOR CLEARANCE TO TIGHTEN CAM SCREW. LINE UP MARKS YOU MADE AND TIGHTEN SCREW.

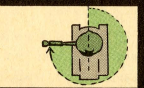


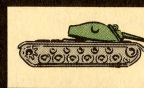
6 RECONNECT SWITCH WIRES AND DEPRESS AND ELEVATE TO SEE IF SWITCH IS OPERATING.

7 TRAVERSE 360° AND SEE IF SWITCH ON SLIP RING BOX IS OPERATING.

8 IT SHOULD CLICK AS GUN PASSES NEAR 90° MARK.

9 IT SHOULD SWITCH OFF WHEN IT PASSES NEAR 270° MARK. BRING GUN AROUND TO POINT FORWARD.





10 TURN ON TURRET POWER AND FULLY DEPRESS GUN.

11 TRAVERSE SLOWLY AND SEE IF GUN LIFTS WHEN NEARING 90° MARK. IF IT DOES GRADUALLY INCREASE SPEED TO FULL SLEW AND TRY FEW TIMES WITH GUN FULLY DEPRESSED

12 ELEVATE GUN ONE DEGREE ABOVE INTERFERENCE SETTING AND TRAVERSE OVER REAR AREA. IT SHOULDN'T LIFT, IF IT DOES RE-ADJUST CAM ON BALLISTIC DRIVE. MAKE SURE CAM SET SCREW IS TIGHT.

It's a pretty neat little trick. But it doesn't entirely take the place of the ol' bean when it comes to manipulating those controls.

ELEVATOR

FOR INTERFERENCE SETTING

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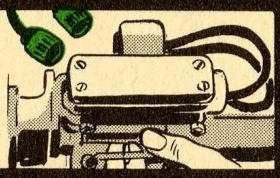

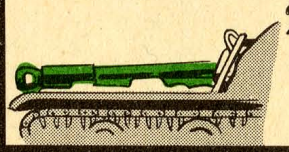

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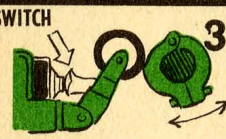

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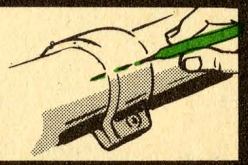

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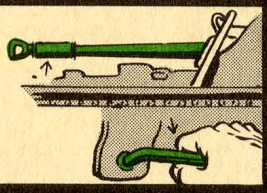

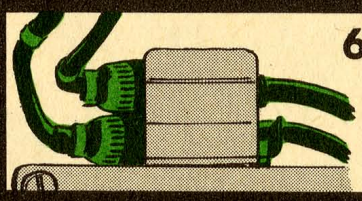

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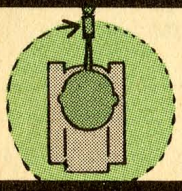

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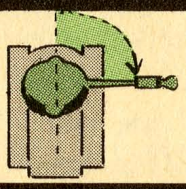

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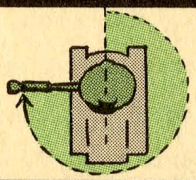

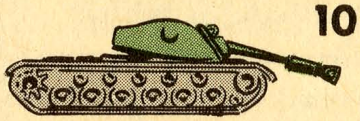

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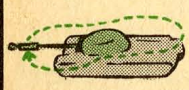

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It's a pretty neat little trick. But it doesn't entirely take the place of the ol' bean when it comes to manipulating those controls.

Half-Mast Trouble Shoots

SPRAG FAILURE EPIDEMIC

Dear Half-Mast,

Some dope other than what's in the TM is needed on the 5-ton truck sprag units, pronto. An epidemic of them are locking in front-wheel drive, or just breaking up—'specially on the M52 truck tractors.

Aside from normal wear and jamming due to improper directional shifts, we can't seem to put our finger on what's causing the failures. Can you give us any dope that'll help us prevent these costly breakdowns?

M. L.

Dear Mr. M. L.,

Here're a few not too well known causes that could be your trouble.

The earlier models of M52's had transfer-case shift-lines of the same length. This caused trouble because when they were disconnected it was a bet they'd be put back on wrong.

With those lines switched, the sprags would work bassackwards. To prevent this, most outfits would mark one line and fitting. Later models came out with one line longer so's you couldn't get 'em switched.

The 5-ton fire trucks have had some sprag troubles—caused by backing the truck into the fire house and parking it with the gear shift in reverse until the fire bell rang. The sprag, of course, remained in the reverse position. Came a fire call, the driver jumped into the truck, started the engine and pulled out like a bat-out-of-hell, with his sprag still in reverse position. Why? He didn't allow enough time to build up air pressure to shift the ram and throw the sprag into forward. Of course you're supposed to get that air pressure built up anyway so you'll have brakes.

This could also happen to M52 truck tractors, 'specially when you back a semi- into a loading platform and pull out a couple of hours later without building up enough air pressure to shift the sprag to forward.

Could also happen when you back a tractor under a semi- and lose air when you hook up the air lines or lose air when you break the lines to pull from under the semi- after you've spotted it.

To boil this down to specific points—make dog-goned sure your drivers always return their shift to neutral when stopping and have the right air pressure in their tanks before pulling out. You'll see the dope on this in a change to TM 9-837. It'll tell you all about waiting for the air-pressure to build up before moving your truck.

Half-Mast

JOE DOPE
SETTING UP AND MAINTAINING AN ORGANIZATIONAL REPAIR PARTS SUPPLY ROOM OR TRUCK
WHAT'S WITH FOS, JOE??
LOOKS LIKE HE'S TRYING TO SET UP A SUPPLY ROOM WITHOUT FIRST KNOWING WHAT HE'S GOTTA DO!
AHH SHADDAP WE JUS' MOVED INTUH THIS AREA!
#!! WHERE'S ME PARTS I ORDERED....I GOT #!! DEAD-LINED VEHICLES!
THERE'S A BIG DIFFERENCE BETWEEN OPERATING IN GARRISON AND OUT OF A SUPPLY TRUCK IN THE FIELD TOO... FOR INSTANCE, SPACE IS LIMITED, AND YOUR STOCK ROOM HAS TO BE READY TO ROLL AT THE DROP OF A HAT!
KEEPING YOUR PARTS NEAT AND READY TO ROLL IS A HECK OF A LOT MORE THAN SPIT-AND-POLISH, IN FACT, THIS WHOLE OUTFIT IS RIDING ON HIS BACK! FOS BETTER GET ON THE BALL.
THEY WAS HERE COUPL'A DAYS AGO!
LET'S HELP HIM, HUH? WE'LL TAKE A LOOK AT EACH SET-UP SEPERATELY. NOW, WHAT DO WE NEED TO ORGANIZE A SUPPLY ROOM..?
YEAH, NOW LESSEE.... HEY FOS, BETTER RUN UP YOUR ANTENNA AND TUNE THIS IN!

THE SUPPLY ROOM IN GARRISON

LE'SSEE...FIRST OF ALL WE NEED A **ROOM**...RIGHT? ...AN' THEN....

YOU NEED **STOCK CARDS**, FELLAS, TO KEEP TRACK O' THINGS....

1 BINS, CABINETS, SHELVES

TO KEEP TOOLS AND STOCK IN ORDER.

3 ISSUE SLIPS

TO LET 'EM KNOW WHAT SUPPLIES I NEED!

DA 446

NO. 9-71 LOCATOR AND INVENTORY CONTROL CARD

5 LOCATOR AND INVENTORY CARD 9-71

...Records your issues and receipts
...Tells you where a part's stored and how many you have in stock
...When to requisition and how many to ask for

FILE CARDS BY SNL GROUP NUMBER —USE A DIVIDER FOR EACH GROUP.

ANY SMALL STURDY BOX

THE SUPPLY ROOM IN GARRISON

LE'SSEE...FIRST OF ALL WE NEED A **ROOM**...RIGHT? ...AN' THEN....

YOU NEED **STOCK CARDS**, FELLAS, TO KEEP TRACK O' THINGS....

1 BINS, CABINETS, SHELVES

TO KEEP TOOLS AND STOCK IN ORDER.

2 YOU NEED DEPARTMENT OF THE ARMY SUPPLY MANUALS

FOR ORDERIN' REPLACEMENT PARTS FOR THE UNIT.

3 ISSUE SLIPS

TO LET 'EM KNOW WHAT SUPPLIES I NEED!

DA 446

4 SHOE TAGS

TO IDENTIFY UNSERVICEABLE ITEMS, I TAKE TO ORDNANCE SUPPLY FOR **DIRECT EXCHANGE!**

EXCHANGE PART OF THIS UNIT

IDENTIFICATION

5 LOCATOR AND INVENTORY CARD 9-71

FILE CARDS BY SNL GROUP NUMBER –USE A DIVIDER FOR EACH GROUP.

...Records your issues and receipts

...Tells you where a part's stored and how many you have in stock

...When to requisition and how many to ask for

ANY SMALL STURDY BOX

DOGGONE, I CAN'T UNNERSTAND WHERE I STORED 'EM!

WHAT DO YOU KNOW, I JUST HAPPEN TO HAVE A PIN-UP ON THE SUBJECT!

Start out by checking **Supply Manuals.** Make out a stock card for each part you're authorized to stock.

This info'll tell you the size and type of your basic load...and what kind of storage space to figure on.

If you're already set up and operating on the "stock according to demand" basis, your load of parts may increase or decrease. You'll have to adjust your shelf space accordingly. (See PS Magazine #26 for dope on "stock according to demand.")

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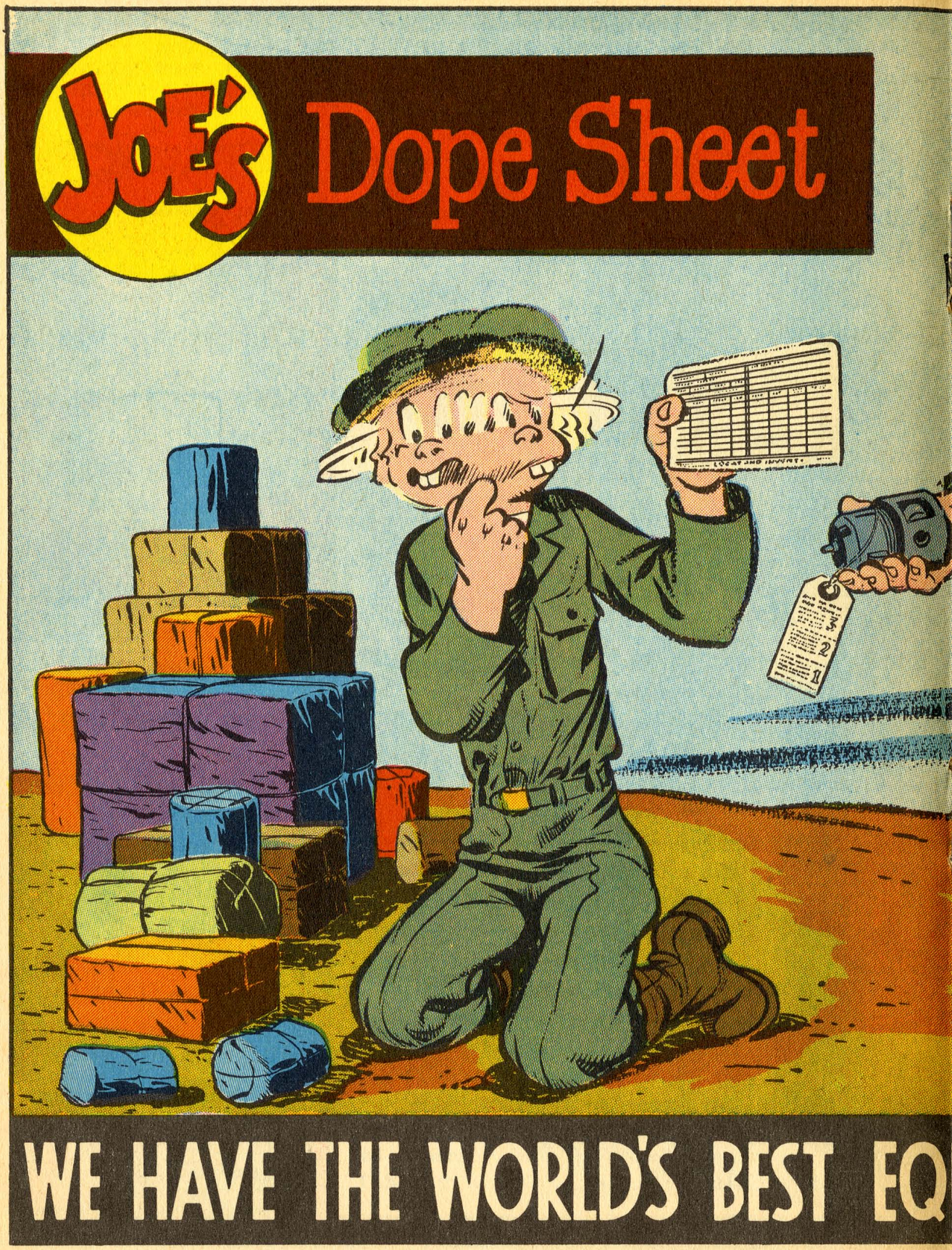
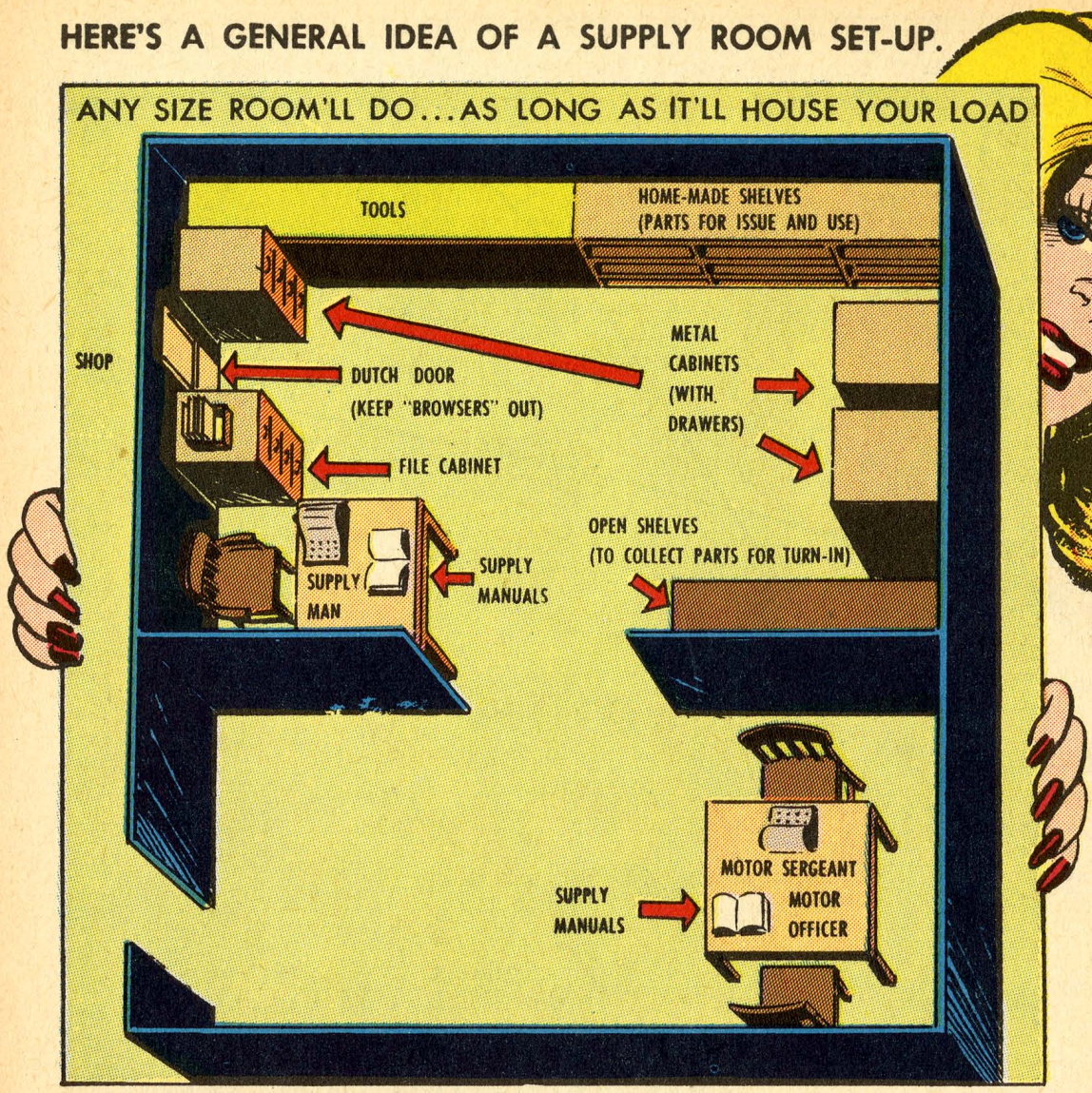

JOE'S
Dope Sheet
WE HAVE THE WORLD'S BEST EQ

JOE'S Dope Sheet
The men who fight...
....The planes that fly!
Depend on the men
Who provide and supply.
KEEP IT READY...
SUPPLY
WILL EISNER
WE HAVE THE WORLD'S BEST EQUIPMENT... Take care of it

UIPMENT... Take care of it

HERE'S A GENERAL IDEA OF A SUPPLY ROOM SET-UP.



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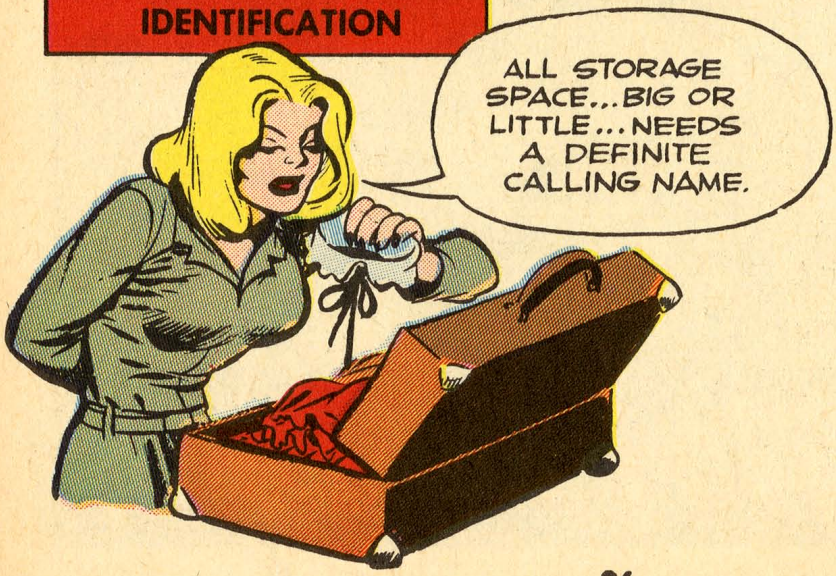
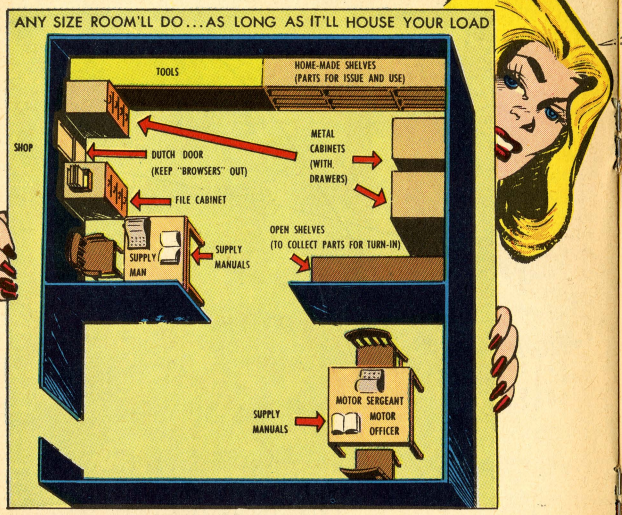


LETTER EACH CABINET

NUMBER EACH BIN OR DRAWER

HERE'S A GENERAL IDEA OF A SUPPLY ROOM SET-UP.

ANY SIZE ROOM'LL DO... AS LONG AS IT'LL HOUSE YOUR LOAD

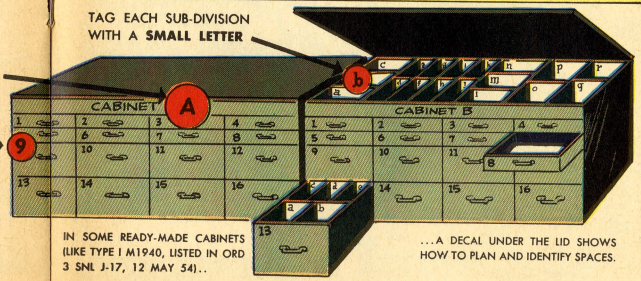


IDENTIFICATION

LETTER EACH CABINET

NUMBER EACH BIN OR DRAWER

TAG EACH SUB-DIVISION WITH A **SMALL LETTER**



IN SOME READY-MADE CABINETS (LIKE TYPE I M1940, LISTED IN ORD 3 SNL J-17, 12 MAY 54)..

...A DECAL UNDER THE LID SHOWS HOW TO PLAN AND IDENTIFY SPACES.

IF THE CABINETS YOUR T/O+E ALLOWS YOU, DON'T GIVE ENOUGH STORAGE SPACE, YOU CAN MAKE YOUR OWN SHELVES.....

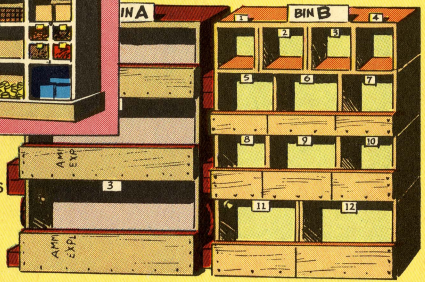
THIS TYPE OF HOME-MADE STORAGE IS OKAY FOR GARRISON... BUT TOO BULKY FOR A FAST MOVE.

KEEP PARTS NEAT AND READY FOR ISSUE.

HEAVY ITEMS ON BOTTOM SHELF FOR SAFETY.

MORE PRACTICAL SHELVING FOR **QUICK** AND **EASY** TRANSFER TO SUPPLY TRUCK

OLD CRATES CLEANED AND STACKED



NAIL SMALL BOARDS ACROSS BOTTOM HALF SO PARTS WON'T ROLL OUT WHEN TRUCK'S ROLLING.

AMMO BOXES

MISCELLANEOUS BOXES

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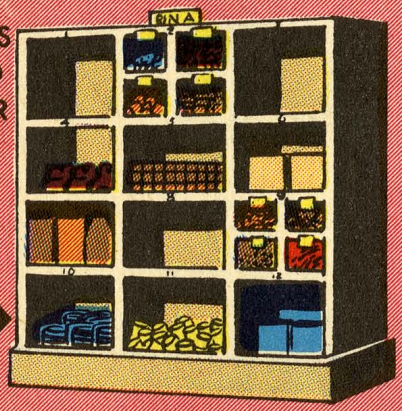

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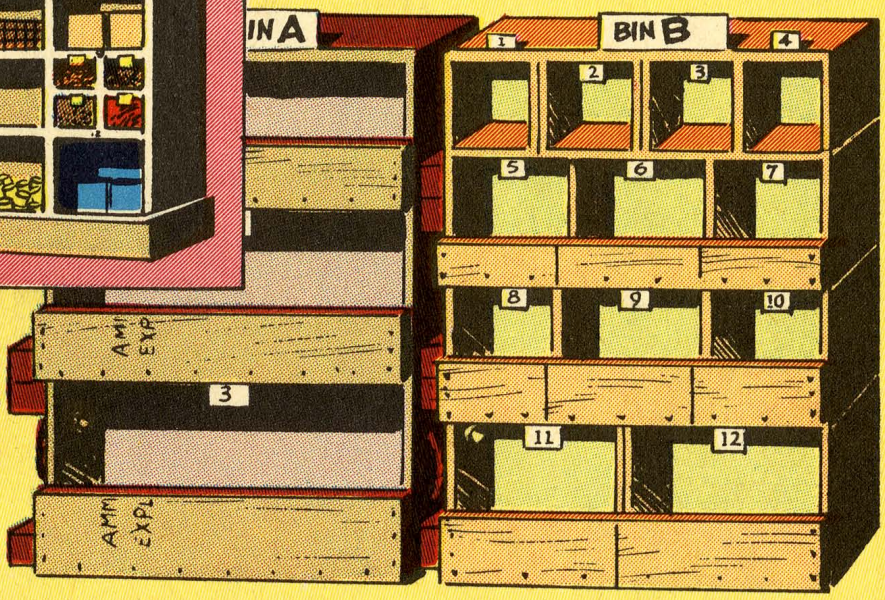

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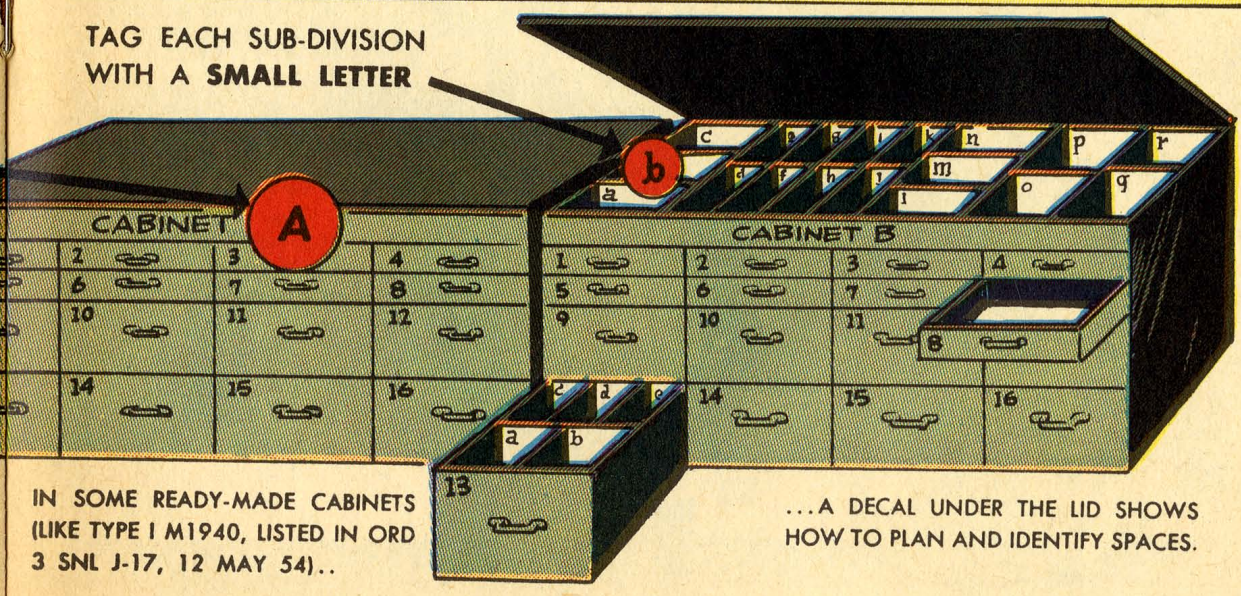
MISCELLANEOUS BOXES

TAG EACH SUB-DIVISION WITH A **SMALL LETTER**



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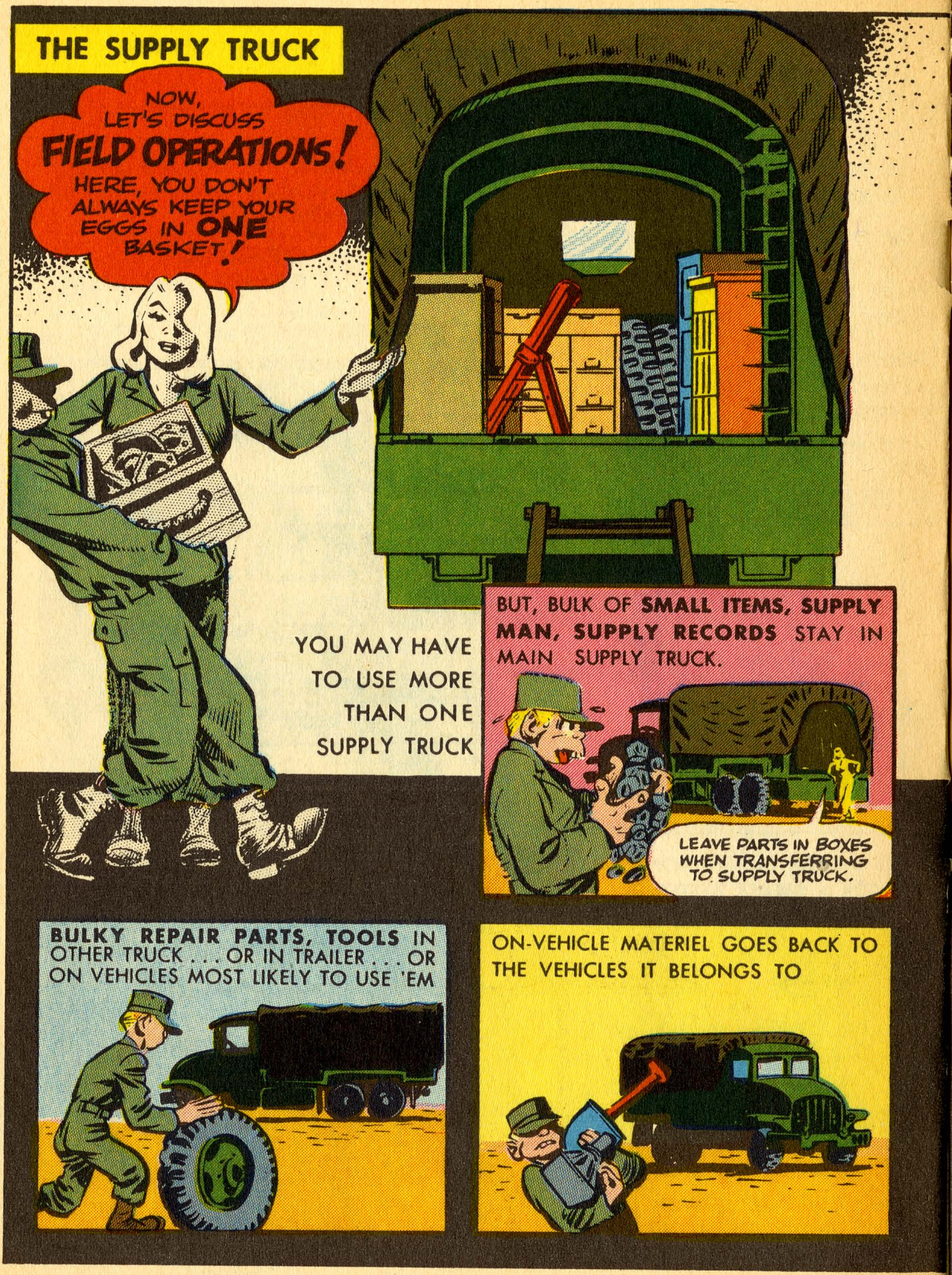
THE SUPPLY TRUCK
NOW, LET'S DISCUSS FIELD OPERATIONS! HERE, YOU DON'T ALWAYS KEEP YOUR EGGS IN ONE BASKET!
YOU MAY HAVE TO USE MORE THAN ONE SUPPLY TRUCK
BUT, BULK OF SMALL ITEMS, SUPPLY MAN, SUPPLY RECORDS STAY IN MAIN SUPPLY TRUCK.
LEAVE PARTS IN BOXES WHEN TRANSFERRING TO SUPPLY TRUCK.
BULKY REPAIR PARTS, TOOLS IN OTHER TRUCK . . . OR IN TRAILER . . . OR ON VEHICLES MOST LIKELY TO USE 'EM
ON-VEHICLE MATERIEL GOES BACK TO THE VEHICLES IT BELONGS TO

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ON-VEHICLE MATERIEL GOES BACK TO THE VEHICLES IT BELONGS TO

IF POSSIBLE, STORE ALL PARTS IN CLOSED T/O & E BINS AND CABINETS . . . OR ELSE IN SAFELY ANCHORED, CLOSED OR PARTLY CLOSED BINS TO KEEP PARTS FROM ROLLING OUT.
BIN A
BIN B
BIN C
SPACE IS AT A PREMIUM . . SO YOU HAVE TO TAKE ADVANTAGE OF EVERY NOOK AND CRANNY TO BE ABLE TO STORE AT LEAST THE SMALLER PARTS AND YOUR SUPPLY RECORDS IN THE TRUCK YOU WORK OUT OF . . .

IF POSSIBLE, STORE ALL PARTS IN CLOSED T/O & E BINS AND CABINETS...OR ELSE IN SAFELY ANCHORED, CLOSED OR PARTLY CLOSED BINS TO KEEP PARTS FROM ROLLING OUT.
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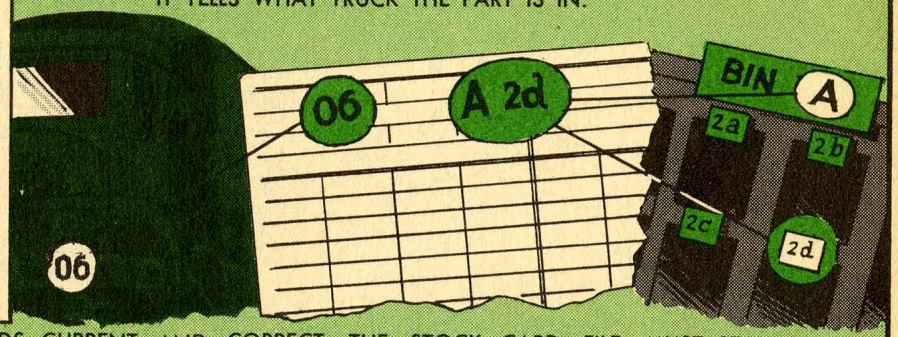
KEEP YOUR SUPPLY RECORDS HANDY AND CORRECT... SO YOU'LL KNOW **WHERE** YOU'VE GOT **WHAT** AND BE ABLE TO LOCATE 'EM PRONTO.

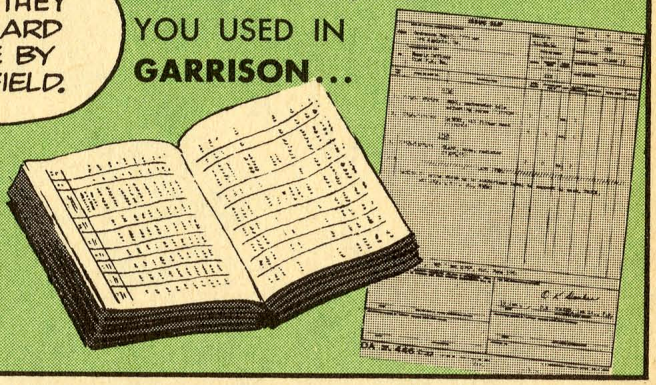
KEEP A **STOCK CARD** FOR EACH ITEM, AND BE SURE IT TELLS WHAT TRUCK THE PART IS IN.



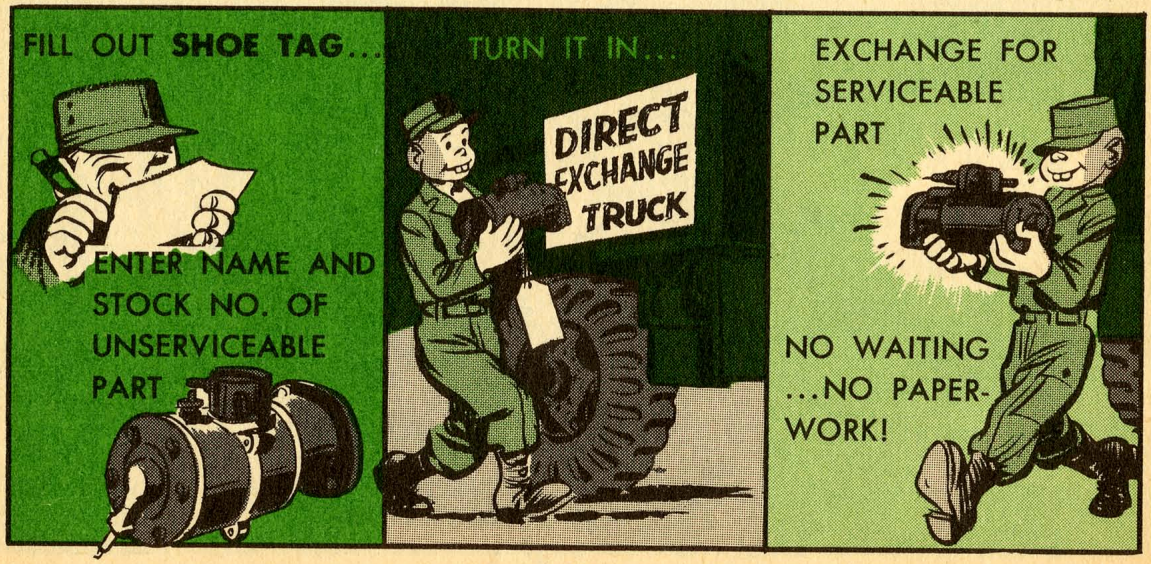
TO KEEP THE CARDS CURRENT AND CORRECT, THE STOCK CARD FILE MUST STAY IN THE TRUCK YOU WORK OUT OF. UP-TO-DATE CARDS PUT COMPLETE INFORMATION ABOUT YOUR STOCK RIGHT AT YOUR FINGER TIPS, REGARDLESS OF WHERE YOUR STOCK IS LOCATED. AND, ANOTHER THING, IF YOU SHOULD LEAVE SUDDEN-LIKE, WHOEVER TAKES OVER YOUR CHORES CAN CONTINUE BUSINESS AS USUAL BY FOLLOWING YOUR CARDS.

REQUISITION BY ISSUE SLIP (DA FORM 446)

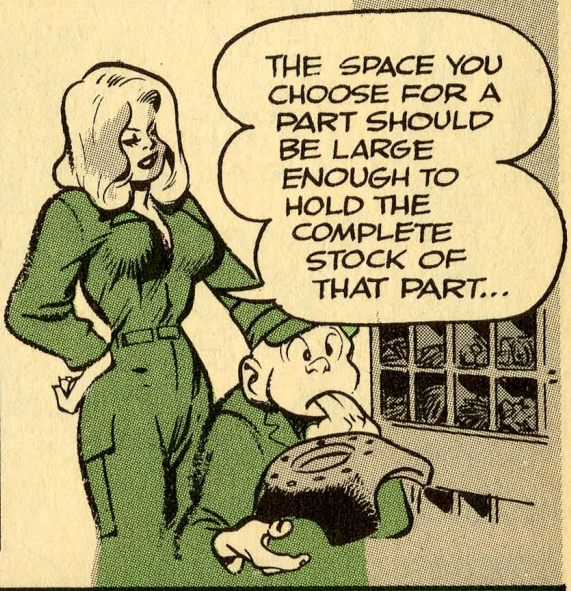
USE SAME SUPPLY MANUALS YOU USED IN **GARRISON**...

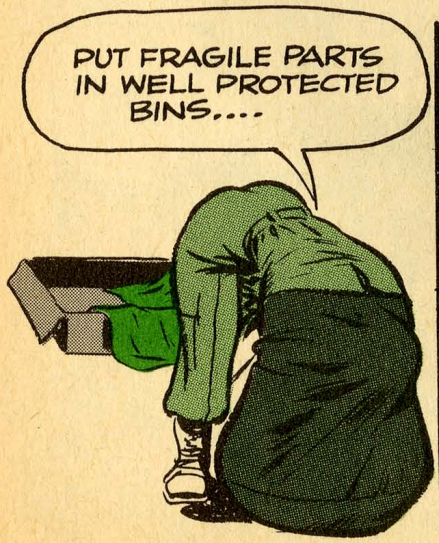


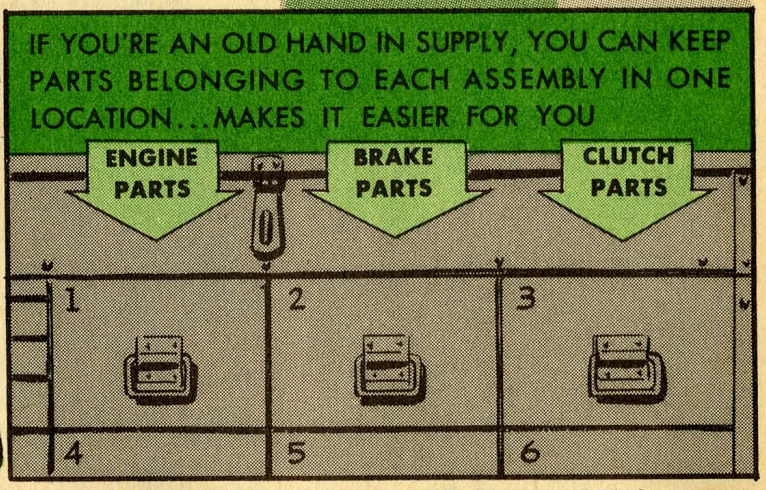
OF COURSE YOU'LL ALSO USE YOUR **DIRECT EXCHANGE**...



AND WHETHER YOU OPERATE IN GARRISON OR IN THE FIELD...BEFORE FILLING BINS, **KEEP THESE POINTS IN MIND...**







DIVIDE SOME BINS FOR SMALL ITEMS

MAKE DISPLAY BOARDS FOR **ODD-SHAPED** ITEMS...

RACKS FOR ITEMS **TOO LARGE** FOR SHELVES

MOST IMPORTANT OF ALL— **IDENTIFY** SPACE YOU PUT PART IN

LOCATOR AND INVENTORY CONTROL CARD

AND KEEP YOUR COLLECTION OF TURN-IN ITEMS IN A BOX OR INCLOSED SHELVES!

NO ROOM IN TRUCK?

...THEN PUT 'EM IN WEATHER-PROOFED BOXES OR CRATES IN THE TRAILER.

BUT DON'T HOARD TURN-IN ITEMS

YAY! I FOUND 'EM!

FOS... COME BACK HERE!

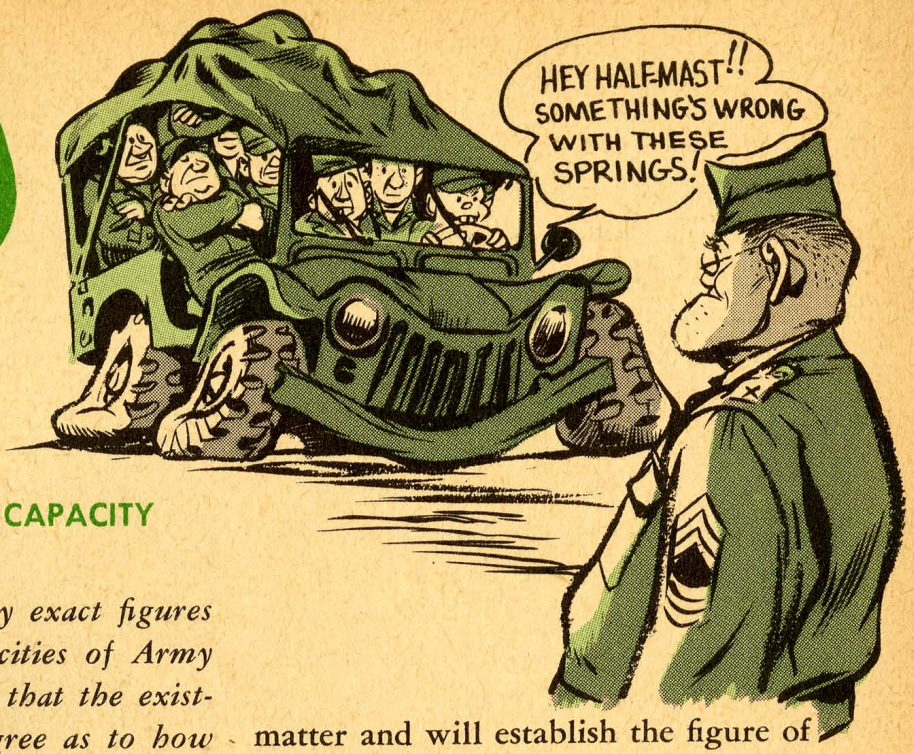
DIDN'T YOU HEAR, JUNIOR....

...DON'T HOARD 'EM— 'NUFF SAID!!!

AW, NOW, JOE....

FRANCE TO FOSGNOFF

SGT. HALF-MAST McCANICK'S ANSWER DEPT.



VEHICLE SEATING CAPACITY

Dear Half-Mast,

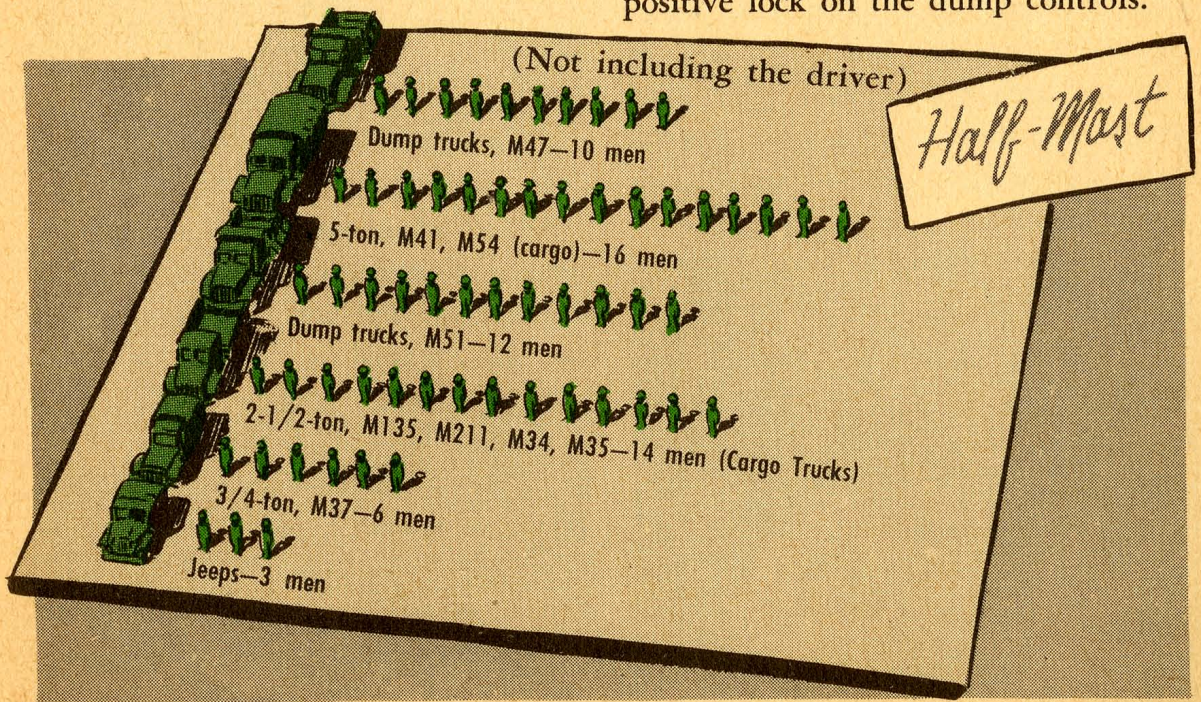
Can you give me any exact figures for the personnel capacities of Army vehicles? I have found that the existing manuals do not agree as to how many men make a safe load.

MSgt D. R. S.

Dear Sgt D. R. S.,

You're right, the manuals do give conflicting figures for the safe load of men in the different tactical trucks. There's a TB coming out to settle the matter and will establish the figure of 21 lineal inches of space per man. Tactical trucks will be loaded like they're shown in the picture.

And be sure, like it tells you in AR-385-55 that any men you carry in a dump truck are seated completely inside the truck, and that you have positive lock on the dump controls.



TWICE-A-MONTH MEN

Dear Half-Mast,

Our Army reserve units meet twice a month. That's the only time our M-series vehicles get a work-out. It's not enough for their batteries—they soon run down and we've got the problem of charging them up again.

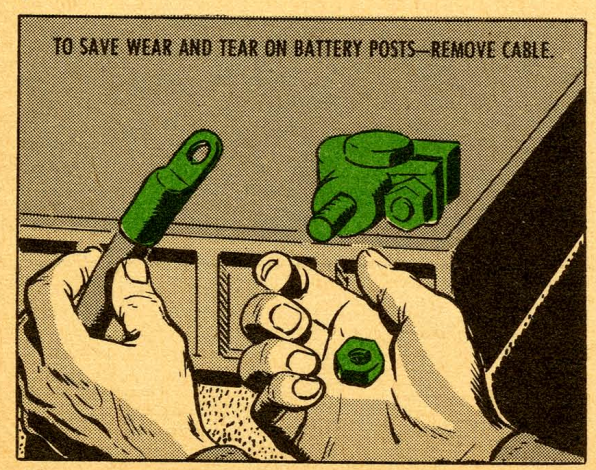
Would you recommend removing all batteries and leaving them near charging equipment between meetings? Then before the meetings they could be quickly tested—then charged if need be.

H. F. S.

Dear H. F. S.,

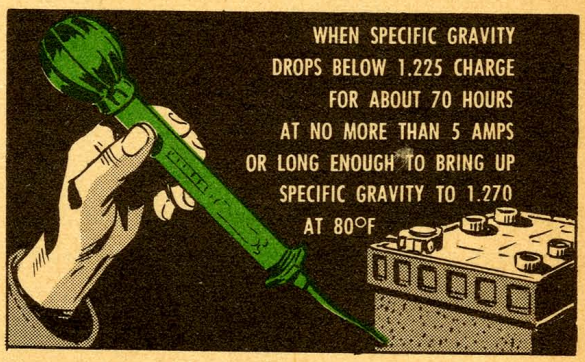
That's OK as a last resort—if you've got the battery storage facilities for the job. But in most cases, taking the batteries out of the vehicles isn't necessary.

First—a fully charged battery self-discharges in about four months. So, if your batteries are constantly running down between meets, you probably have a hard-to-find slow leak somewhere in your electrical system. To eliminate this type of drain, other than finding the short and fixing it, disconnect the battery's ground strap after your meets.



Incidentally, you can remove the strap without bothering its clip just by unscrewing the single nut tying them together. Which'll save wear and tear on your battery posts.

Then every time you meet check their specific gravity. When it goes below 1.225, take it off the vehicle and



charge it for at least 70 hours at no more than 5 amps. Or until the specific gravity rises to about 1.270 (at 80°F.). This way you'll only be pulling the batteries that need recharging.

See TB Ord 463 for all the details on battery charge.

Half-Mast

M5A4 CLUTCH STUFF

Dear Half-Mast,

How's about giving us a rundown on clutch and clutch linkage adjustments for the M5A4 high-speed tractor? Sure would be helpful.

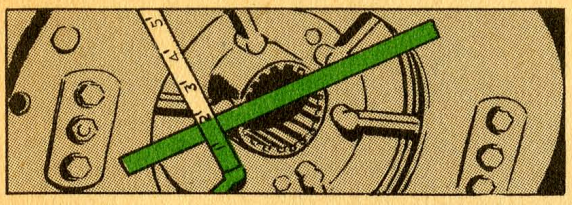
SFC H. S.

Dear Sgt H. S.,

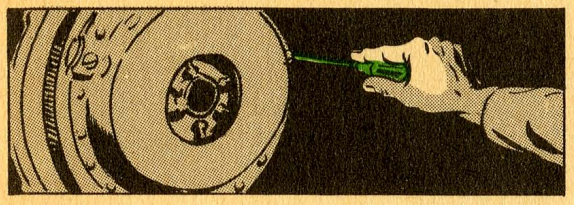
Allll righttteeeee! Here're the adjustments specified for:

Clutch-release finger. With clutch assembly installed in flywheel, the distance from top of the pressure plate cover to the six thrust buttons

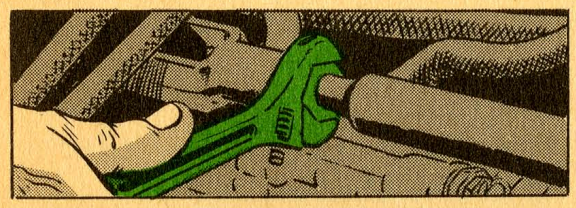
should measure 1-3/8 inches. All fingers gotta be the same distance (within .010 inches).



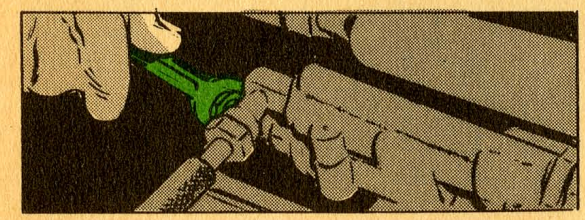
Center drive-plate. Turn the three center drive-plate adjustment screws clockwise till they bottom lightly; then turn 'em back — four notches.



Clutch-pedal. Remove pin from clutch-rod and adjust clevis to get 1-1/2 inches free-travel at the clutch-pedal; install pin and tighten the lock-nut.



Clutch-brake. Adjust the drive-line brake application-valve to have the brake applied when the clutch is fully disengaged and the pedal's at the end of its travel.



Half-Mast

M52 TORQUE RODS

Dear Half-Mast,

Every time we take a Truck Tractor M52 to Ordnance we get gigged for having loose torque rods. The 3/4-in drive socket set doesn't have a socket big enough to tighten it, in fact, there is no wrench in the tool set No. 2 big enough. My impression is you only tighten or repair the equipment for which you have tools authorized. Is that right?

WOJG A. J. M.

Dear WOJG A. J. M.,

You're right on both counts—there's no wrench in your tool set big enough to tighten those torque rods, and you only tighten or repair the equipment for which you have tools authorized.

One of these days you'll see something in black and white that'll tell you what tool you can use or it will delete that part of your TM that tells you to tighten those torque rods. Until it does come thru, better tell your supporting Ordnance maintenance unit you don't have the tool so something can be provided or instructions issued as to what to do.

Half-Mast

ARMAMENT

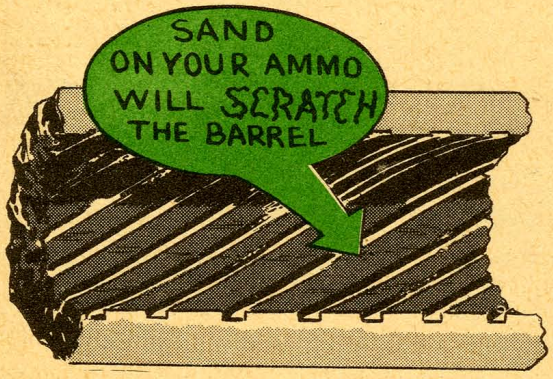
To keep your piece Firing right, you need—

CLEAN AMMO

S'funny how gosh-awful particular some men can be about their shootin' irons—and how careless they can be about what they shoot in 'em.

They shine like crazy on their weapon—but when they go to fire they slam any old dirty round home. What they don't know is that dirty ammo'll tear up a gun faster'n anything else—except maybe incoming ammo.

The round you're firing (from .22-cal. to 280-mm) needs the same lovin' care as the piece that fires it. (Unlike your weapon, the ammo is somebody else's worry **after** you fire it.)



Let's say you throw a round in with a grain or two of sand on it. What happens?

The projectile goes spinning on its way, taking the sand with it—right through the barrel. Something's gotta give, and oddly enough, it's usually the metal.

That sand will put a scratch in the barrel every time. The scratch becomes what's called a "stress area." The gas from each round you fire later gnaws away at the spot and you get a bigger scratch.

The barrel at that spot gets weaker and weaker. Until one day you throw in a round with a little oil, water or dirt on it and—**blooey!** Scratch one gun and maybe half a crew.

'Course, the more dirty rounds you fire the more stress areas the barrel's gonna have. And it's nip-and-tuck as to which area will blow first.

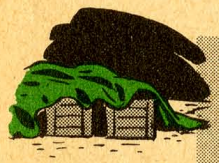
Ah, it'd never happen in a million years, you say.

Just ask somebody who's been around. It's just as likely to happen with your 280-mm as it is with your carbine. Any time a round is forced

through a barrel with a smaller diameter than the round you've got a lot of pressure on the barrel. Whether the round goes on through, or whether the barrel busts wide open depends on how strong the barrel is.

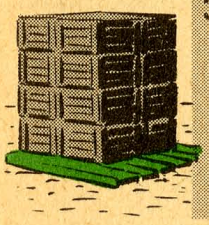
To make sure it's always the round that moves, keep the barrel as strong as possible and the round as small as possible. Dirt, water, oil or sand just make the round bigger and the pressure on the barrel greater.

Here're a few pointers on keeping your ammo clean, your barrel strong and your pressure down:

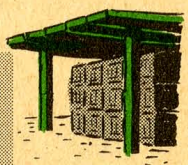


1. Keep your ammo clean at all times—in storage, on the move and on the line.

2. If it gets dirty, wipe it with a clean, dry cloth the first chance you get. If nothing else, wipe each round before you shove it home.



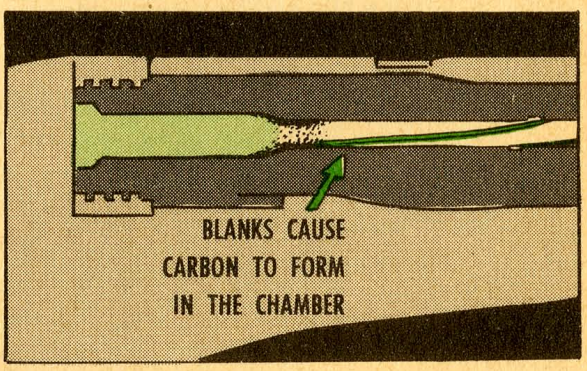
3. Keep your small-arms ammo off the ground, or at least, keep the ground off your ammo. Keep an eye on it at all times and stop any foreign matter from accumulating. Don't be shy about wiping your clips and belts of ammo.

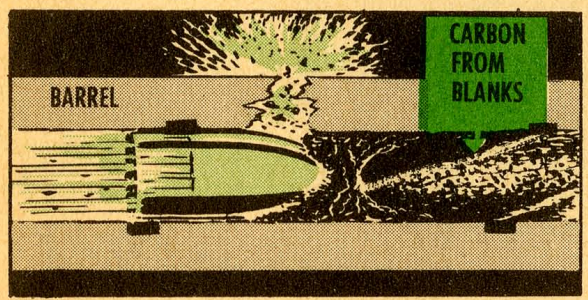


CLEAN AFTER BLANKS

Firing live ammo in your small-arm right after firing blanks is strictly verboten... unless you clean your piece first.

For one thing, the carbon from the blanks builds up in the barrel, leaving you wide open for a rupture. For another, the blanks cause a ring of carbon and stuff to form inside the chamber, keeping the live rounds from seating just right. This not only has an unhappy effect on your disposition, but it plays hob with your headspace.



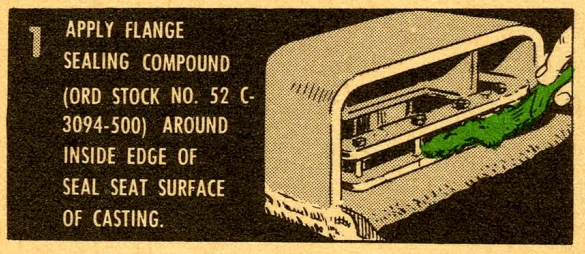


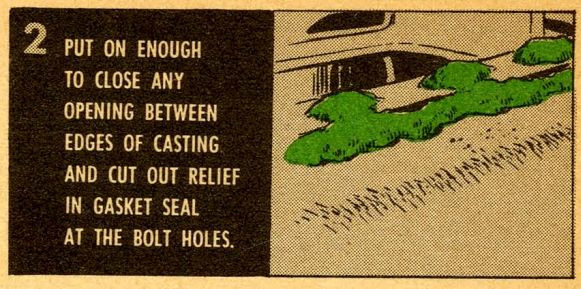
So clean your barrel immediately after firing blanks. You'll have much more fun on the wet runs when you've got a good clean piece.

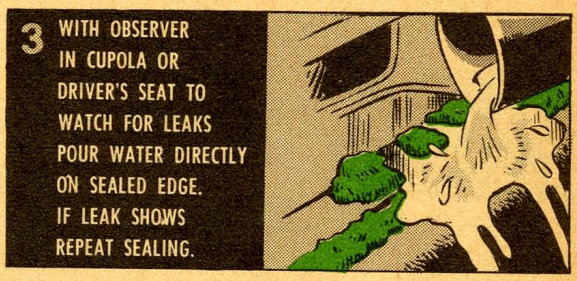
MUD IN YOUR EYE?

Some of the outside seals on the M41A1 tank periscopes aren't as watertight as they could be. Particularly on tanks with Ordnance serial numbers below 3211. A new type sealer was developed with that number.

If you're getting mud and moisture in your eyepiece, here's what you can do:







Remember, tho—do not use water under pressure. Pour it on, don't shoot it.

T69 BOGIE BLOOPER

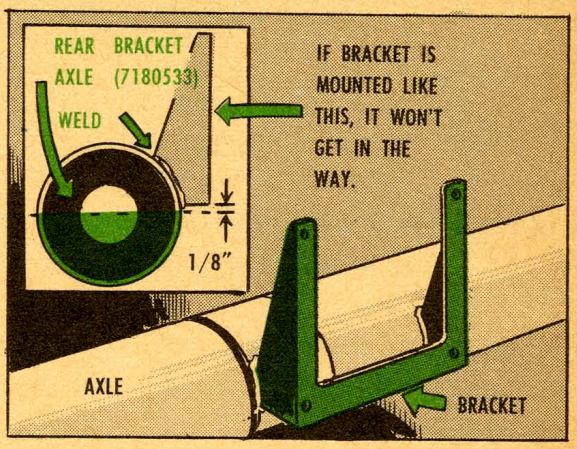
Dear Half-Mast,

Before MWO Ord D48-W3 was applied to our T69 gun mount (75-mm gun) we had trouble with the wedge handle hitting the receptacle box on the rear bogie. The MWO took care of that by moving the box, but now the box gets in the way when we put the mount into firing position. What gives? Did somebody foul up here?

Sgt J. S. B.

Dear Sgt J. S. B.,

Somebody put that bracket back too high or too low on the bogie axle, and not according to figure 3 of the MWO. And believe me, that's an easy mistake to make. About the only time the axle is in the right position for the MWO is when the bogie is in the traveling position. (The MWO told you about that.)

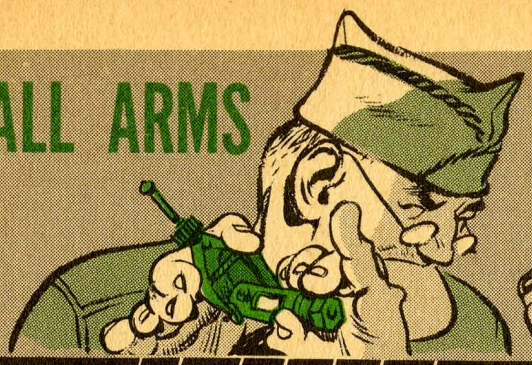


If the work was done while the bogie was detached, the bracket was probably put on wrong. It may have looked right then, but when the bogie was attached for traveling, the axle turned and threw your bracket off the beam.

Yell for Ordnance and have 'em put it on right—while the mount's ready for travel.

Half-Mast

SMALL ARMS



LUBRICANTS AND CLEANING MATERIALS

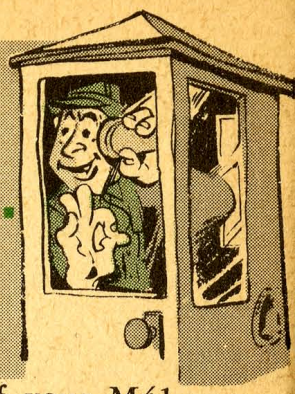
	.45 CAL. PISTOL	.30 CAL. CARBINE, .30 CAL. M1 RIFLE, .30 CAL. BOLT ACTION RIFLE, .45 CAL. SUBMACHINE GUN	.30 CAL. BROWNING AUTO. RIFLE AND .30 CAL. MACHINE GUN	.50 CAL. MACHINE GUNS	RECOILLESS RIFLES	MORTARS	QM STOCK NUMBER	ORD STOCK NUMBER	FEDERAL STOCK NUMBER
COMPOUND, CLEANING SOLVENT: RIFLE BORE CLEANER JAN-C-372,	A	A	A	A	A	A		51-C-1313-392 (2 OZ) 51-C-131-396 (6 OZ) 51-C-1313-400 (1 QT) 51-C-131-405 (5 GAL)	6850-224-6656 (2 OZ) 6850-224-6657 (6 OZ) 6850-224-6658 (1 QT) 6850-224-6663 (1 GAL)
SOAP & HOT WATER	A	A	A	A	A	A			
HOT WATER	A	A	A	A	A	A			
OIL	CD	CD	CD	CD	CD	CD	SPEC. 14-0-2833-992 (2 OZ) 14-0-2833-994 (4 OZ) 14-0-2834-10 (1 QT) MED. 14-0-2833-105 (2 OZ) 14-0-2833-120 (1 QT) 14-0-2833-125 (5 GAL) 14-0-2833-155 (55 GAL)		9150-185-0629 9150-257-5436 9150-231-6689 9150-231-2360 9150-231-2361 9150-231-2356 9150-231-2357
PATCHES	A	A	A	A				2-P-600-40 (PACIFIC THEATER) 2-P-600-20 (ALL OTHERS)	
COMPOUND, CLEANING SOLVENT: DEGREASING SELF-DEMULSIFYING (M-MIL-S11090 ORD)	E	E	E	E	E	E		51-S-4717-725 (5 GAL)	6850-224-6666
CLOTH OR WASTE	B	B	B	A B	A B	A B	27-C-39000-30	27-C-2684-880	7920-267-1219
CLOTH BORE CLEANING				A				27-C-923	
CLOTH, ABRASIVE CROCUS 9X11 SHEET 50-SHEET SLEEVE (P-C-438)	B*	B*	B*	B*	B*	B*		42-C-20420-50	5350-192-5052
GREASE		C						14-G-1435-910	9150-248-3480

A—To clean bore
B—To clean weapon (other than bore)
C—To lubricate
*Crocus Cloth is used only by the armorer artificer and weapons repairman

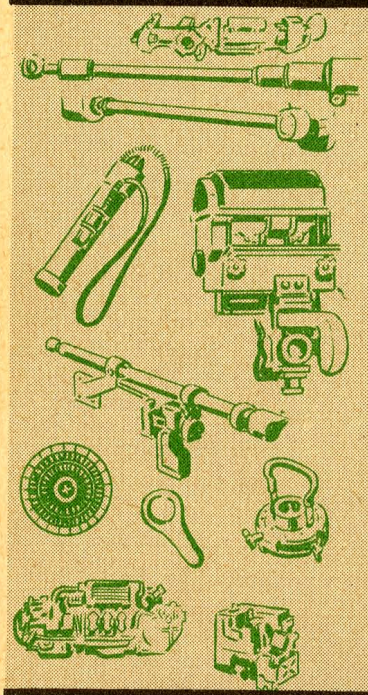
D—To preserve (short term)
Med. wt. oil for above 32° F and salt water
Spec. wt. oil for below 32° F
E—To clean after storage

Light Tank Vehicles...

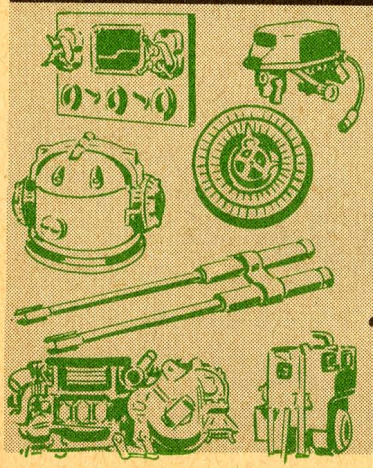
WHAT'S NEW IN NUMBERS...



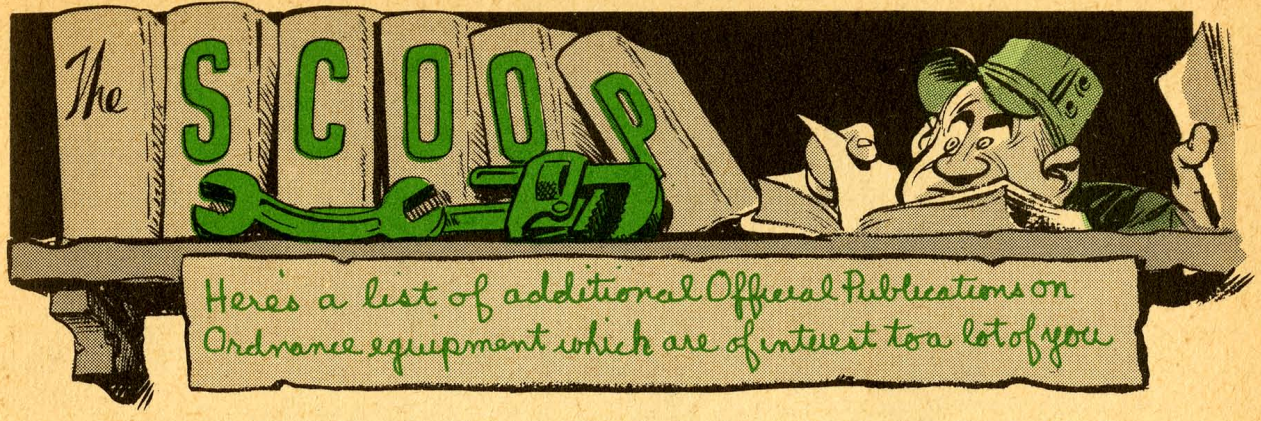
Here's a rundown on the M-numbers for the components of your M41, M41A1, or M42 vehicles. The old number is in parentheses.



M41, M41A1 LIGHT TANKS	PRESENT COMPONENT NUMBERS (OLD NUMBER IN PARENTHESES)
MOUNT, COMBINATION, 76-MM	M76 (T138E1)
GUN, 76-MM	M32 (T91E3)
DRIVE, BALLISTIC	M4 (T23)
LIGHT, INSTRUMENT	M30
MOUNT, PERISCOPE	M93 (T176E1)
MOUNT, PERISCOPE	M94 (T177E2)
MOUNT, TELESCOPE (M41 ONLY)	M92 (T178)
MOUNT, TELESCOPE (M41A1 ONLY)	M92A1 (T178E1)
PERISCOPE, LOADER'S	M13
PERISCOPE, DRIVER'S	M17
PERISCOPE, DRIVER'S, INFRA-RED	M19
PERISCOPE,	M20A1
QUADRANT, GUNNER'S	M1, M1A1, W/CASE, CARRYING, M18, M56 OR M82
SETTER, FUZE	M27
TELESCOPE	M97 (T156)
INDICATOR, AZIMUTH	M31 (T24)
TRANSMISSION	CD 500-3
MAIN ENGINE	AOS 895-3
AUXILIARY GENERATOR ENGINE	A-41-1 AND A-41-2



M42 (TWIN 40-MM)	PRESENT COMPONENT NUMBERS (OLD NUMBER IN PARENTHESES)
LOCAL CONTROL SYSTEM	M16A1E1
DRIVE CONTROLLER	M12E2
OIL GEAR	M6A1E1
WIRING SET	M10A1E1
SIGHT, COMPUTING	M38 (T154)
INDICATOR, AZIMUTH	M27
PERISCOPE, DRIVER-COMMANDER	M13
PERISCOPE, INFRA-RED	M19
MOUNT, 40-MM	M4E1
GUN, 40-MM	M2A1
TRANSMISSION	CD 500-3
MAIN ENGINE	AOS 895-3
AUXILIARY GENERATOR ENGINE	A-41-1 AND A-41-2



SNL's

Ord 7 SNL C-77 Rifle, 105-mm, M27, M27A1; rifle, 105-mm, M75, M75A1, Mar 55

Ord 7 SNL D-28 Gun, 90-mm, M1 series on mt, gun AA, 90-mm, M1A1, M1A2 w/mech, recoil M1A1 series, Mar 55

Ord 8 SNL D-49 Howitzer, 8-in, T89; gun, 155-mm, T80; mt, 155-mm gun, 8-in how, T58, Mar 55

Ord 8 SNL G-249 Vol 36 Winteriz equip for tank, med, M46, Feb 55

Ord 8 SNL G-249 Vol 39 Winteriz equip for tank, 90-mm gun, M47, M46A1, Feb 55

Ord 6 SNL J-8 Sec 1 Tool set, Field maint, expl ord disp sqd (41-T-3537-100), Mar 55

Ord 6 SNL J-16 Sec 42 Tool sets, field and depot maint for: Truck, M135, M211, M215, Truck, shop van M220, Truck, tank, gasoline 1,200-gal M217, Truck, water tank, 1,000-gal, M222, Truck Tractor, M221, Mar 55

Ord 7-8 SNL J-117 Drill, elec, port, 115-W, univ curr, h-d, 1/4-in cap (Black & Decker mods L and V-32) (40-D-341) and drill, elec, port 115-V, univ curr, h-d w/vert stand, 1/4-in cap (Black & Decker mods L and V-32) (40-D-354), Mar 55

Ord 7-8 SNL J-124 (TO 32B2-2-30-4) Drill, elec: 115-V, univ curr h-d, 3/8-in cap (Albertson mod No 1517 (40-D-343), drill, elec: 115-V, univ curr h-d, w/vert stand, 3/8-in cap (Albertson mod No 1517RA) (40-D-344), Mar 55

Ord 7-8 SNL J-494 Grinder, pneu, port, pistol grip handle, w/one 6x1-in whl (vitrified), and one size 8x1-in wheel (organic) (Chi Pneu Tool, Size 331-P-4250, mod A) (40-G-169), Mar 55

Ord 7-8 SNL J-496 Drill, elec, port 115-V, univ curr h-d, 3/8-in cap (Millers Falls, No. 538BA) (40-D-343), Mar 55

Ord 7-8 SNL J-507 Drill, elec, port, 115-V, univ curr, h-d, 1/2-in cap (Stanley Works mod 122) (40-D-345), Mar 55

Ord 7-8 SNL J-517 Spray guns, paint: press feed, 7 CFM (DeVilbiss mod PMBC-510 No. 58-FX) (4940-261-8413); syphon feed, 4-1/2 CFM (DeVilbiss mod PMBC-510 No. 45-E) (4940-261-8414); syphon feed, 7 CFM (DeVilbiss mod PMBC-510 No. 58-E) (4940-261-8415), Mar 55

ORDNANCE MWO'S

F235-W15 Periscope M19; Install recept cap, F, Mar 55

G1-W60 SP twin 40-mm gun M42 (T141), 76-mm gun tank M41 (T41e1), and SP 155-mm how M44 (T194): Install new spring pins in range selector contr assy, F, Mar 55

G245-W1 Amphib cargo carrier M76 (T46E1): Install new transm and engine oil-fill pipes and modif crankcase breather pipe, F, Mar 55

G252-W1 Cargo tract M8A1 (M8E2): Modif air system to provide man contr of elect brakes on towed veh, F, Mar 55

G784-W1 37-pass 4x2 integ Bus (ACF-Brill mod C-37M): Install protective shield for gen, F, Mar 55

TECHNICAL BULLETINS

T B9-804-12 (TO 36A5-1-241) 1/4-ton 4x4 util truck M38: To prev contact of front wheels against chassis frame, fender, and lifting hook, O, Mar 55

TB 9-1575-1 Wristwatches: Install waterproof-type case, D, Mar 55

TB Ord 507 (TO 39A-5A-13) Repair of small arms wooden comps, D, Apr 53

MISCELLANEOUS

SB 9-75 Inspection of small arms gages, D, Mar 55

LO 9-3058 Rifle, 106-mm, M40, (T170E1); mt, 106-mm rifle, M79, Feb 55

NOTE—On TB's, SB's and MWO's:
O—Organizational Maintenance
F—Field Maintenance
D—Depot Maintenance

DANGER... CARBON TET

Hold off on cleaning bearings and other things with carbon tetrachloride. Its vapors are dangerous to you and other guys around you.

And while you're at it, cross out that item No. 3, page 5, in PS Magazine Issue 32, which tells about using carbon tet. That step in cleaning bearings can be left out anyway because the other steps in cleaning do a real good job.

ENGINEERS

SGT. DOZER'S

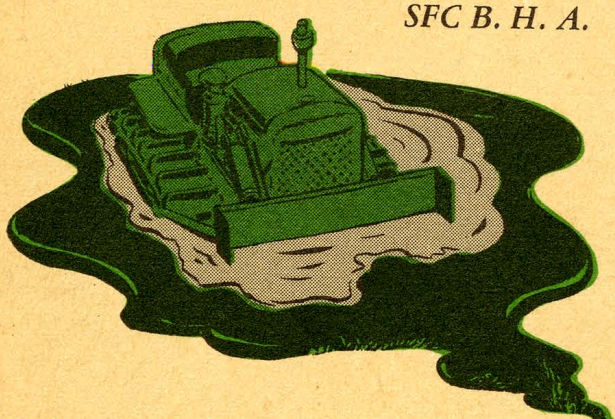
DIRT-STIFF CLINIC

WELL OILED

Dear Sgt Dozer,

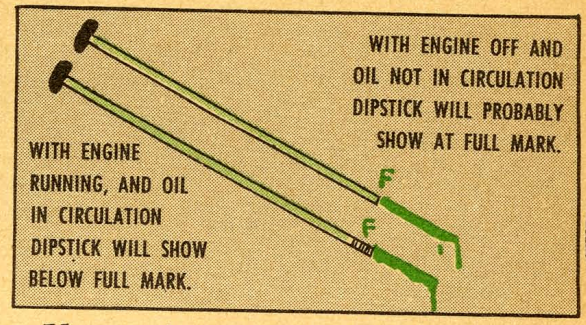
I've noticed that on all Engineer equipment, especially Caterpillar, there is an excessive amount of oil put in all engines. Every time we change oil on our D7, we always put in from 5 to 6 quarts over the full mark. That seems like a lot of waste. The equipment's got dipsticks, so why not use them?

SFC B. H. A.



Dear SFC B. H. A.,

That's a point well taken, Sergeant. As for your D7, LO 5-3068 tells you to put in 22 quarts of oil when you fill the crankcase—no more, no less. It's nothing but waste when you go over that. When you overfill the crankcase, the engine'll lose power and be short on breathing space and room for expansion foaming. Too much oil will end up being blown out the crankcase vent...Then you've got a messy engine.



You can't go wrong by going by the book. When you check the oil with the engine running, it'll register a little under the full mark. That's nothing to worry about, 'cause you've got oil out circulating in the system. When you shut off the engine, check 'er again, and chances are you'll find the oil right up to the full level.

Sgt Dozer

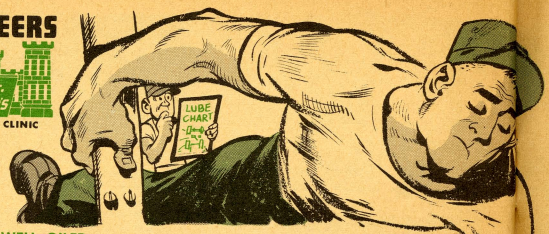
CLEAN AS A WHISTLE

"Keep it Clean" is one slogan that never grows old with maintenance men. Sharp operators and greasy-mitted mechanics really know the importance of the constant battle against the dirt vil-

ENGINEERS

SGT. DOZERS

DIRT-STIFF CLINIC



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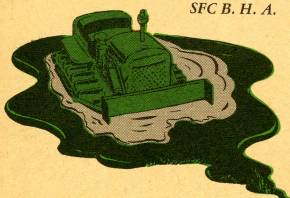

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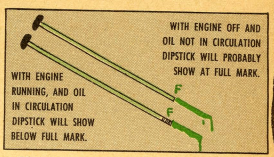

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Sgt Dozer

CLEAN AS A WHISTLE

"Keep it Clean" is one slogan that never grows old with maintenance men. Sharp operators and greasy-mitted mechanics really know the importance of the constant battle against the dirt villain. This is 'specially true around hydraulic systems. Dirt'll give fits to hydraulic pumps, valves and cylinders — the same way it does to other parts of your Engineer equipment.

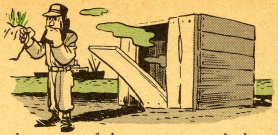
When you do maintenance on any part of a hydraulic system, keep an eye peeled for that troublesome character named I. M. Dirt. Plan your maintenance job so that dirt won't stand a chance of creeping into the system. You've got to have clean tools and parts when you tie into a hydraulic system.

Cleanliness in working with hydraulic systems is just like standin' pat with a royal flush in a draw poker game . . . you can't beat it.

HERE'S A HOT LINE

Here's a hot line you can well do without. It's one of the leads from the overspeed switch to the control panel on the Hobart 400-cycle generator. Some of the units in overseas areas have been having trouble with this lead touching against the exhaust pipe and burning in two.

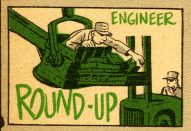
Normally, this'd never happen, but



when some of the sets were packed at the depots for overseas shipment a silica-gel bag was forced down behind this wire. The guy packing the set probably figured this'd be a good way of holding the bag in place. His intentions were good, but as a result the wire was forced over against the manifold and didn't return to its original position when the bag was removed.

Then, when the set was started up, the wire burned in two, grounded out, and caused difficulty with the control system. Also, when the wire burned in two, the contactor wouldn't close.

This might be a good thing to remember—'specially if you're doing any unpacking of generator sets at overseas points. It'll only take a second to put that wire back in its original position, and it's sure to save you a lotta headaches.



TECHNICAL MANUALS

5-1185 Roller, road, GED, 5-8 ton, Gallon mod 156, 10 Jan 55

5-4099 Drill, pneu, port, rock, Davey mod DS-58, 25 Jan 55

5-5010 Gen set, 60-KW, Detroit Diesel mod, 18 Jan 55

5-5013 Gen set, 15-KW, US Motors mod 15-US-10327A, 15 Dec 54

5-5457 Welder, elec arc, 200-amp, Hobart mod GL-2183-S, 24 Jan 55

5-5520-1 Crane-shovel, 1/2-cu yd, 10-Ton, Wayne mod 40, 23 Dec 54

5-5143-2 Gen set, 100-KW, Stewart & Stevenson Series 15700, 17 Jan 55

5-4065 Nallriver, Independent Pneu Thor mod 6JN, 18 Jan 55

5-5143-3 Gen set, 100-KW, Stewart & Stevenson Series 18500, 18 Jan 55

5-5211 Engine, diesel, Gen Mtrs mod 6-110, 9 Dec 55

LUBE ORDERS

5-1477 Air condition unit, Typhoon mod SA-500, 2 Feb 55

5-2049 Pump, centrif, fire trk mtd, Darley mod F-300, 27 Jan 55

5-5062 Compressor, air, 60-cfm, Schramm mod 60 (Skid Mtd), 27 Jan 55

5-5063 Compressor, air, 60-cfm, Schramm mod 60 (Base Mtd), 27 Jan 55

5-5093 Compressor, air, 16-cfm, American Brake Shoe GC-331-XA, 28 Jan 55

5-1162 Crane-shovel, 1/2-cu yd, 5-ton, Osgood mod 200, 3 Jan 55

5-1305 Loader, aggr, bucket, Nelson mod Q-12 TMP, 17 Jan 55

5-2014 Pump, diaph, 100-GPM, Novo model AD-4, 31 Jan 55

5-2070 Distill unit, Cleaver-Brooks mod DVC-8M, 17 Jan 55

5-2312 Pump, deep well, Cook mod SK-660, 3 Jan 55

5-3302 Tractor, whl type, M-R-S mod 150, 31 Dec 54

5-5359 Gen set, 5-KW, Onan mod 5 JWC-1-E/270A, 4 Jan 55

lain. This is 'specially true-around hydraulic systems. Dirt'll give fits to hydraulic pumps, valves and cylinders — the same way it does to other parts of your Engineer equipment.

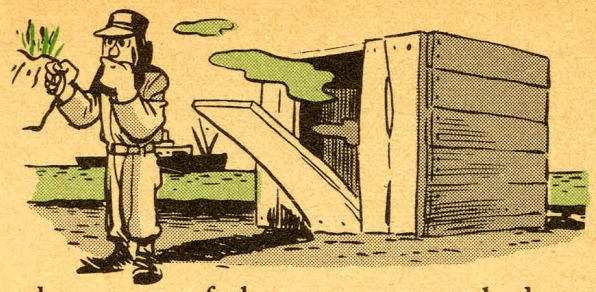
When you do maintenance on any part of a hydraulic system, keep an eye peeled for that troublesome character named I. M. Dirt. Plan your maintenance job so that dirt won't stand a chance of creeping into the system. You've got to have clean tools and parts when you tie into a hydraulic system.

Cleanliness in working with hydraulic systems is just like standin' pat with a royal flush in a draw poker game . . . you can't beat it.

HERE'S A HOT LINE

Here's a hot line you can well do without. It's one of the leads from the overspeed switch to the control panel on the Hobart 400-cycle generator. Some of the units in overseas areas have been having trouble with this lead touching against the exhaust pipe and burning in two.

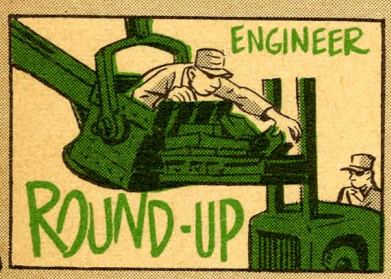
Normally, this'd never happen, but



when some of the sets were packed at the depots for overseas shipment a silica-gel bag was forced down behind this wire. The guy packing the set probably figured this'd be a good way of holding the bag in place. His intentions were good, but as a result the wire was forced over against the manifold and didn't return to its original position when the bag was removed.

Then, when the set was started up, the wire burned in two, grounded out, and caused difficulty with the control system. Also, when the wire burned in two, the contactor wouldn't close.

This might be a good thing to remember—'specially if you're doing any unpacking of generator sets at overseas points. It'll only take a second to put that wire back in its original position, and it's sure to save you a lotta headaches.



TECHNICAL MANUALS

5-1185 Roller, road, GED, 5-8 ton, Galion mod T5G, 10 Jan 55

5-4099 Drill, pneu, port, rock, Davey mod DS-58, 25 Jan 55

5-5010 Gen set, 60-KW, Detroit Diesel mod, 18 Jan 55

5-5013 Gen set, 15-KW, US Motors mod 15-US-10327A, 15 Dec 54

5-5457 Welder, elec arc, 200-amp, Hobart mod GL-2183-S, 24 Jan 55

5-9520-1 Crane-shovel, 1/2-cu yd, 10-Ton, Wayne mod 40, 23 Dec 54

5-5143-2 Gen set, 100-KW, Stewart & Stevenson Series 15700, 17 Jan 55

5-4065 Naildriver, Independent Pneu Thor mod 63N, 18 Jan 55

5-5143-3 Gen set, 100-KW, Stewart & Stevenson Series 18500, 18 Jan 55

5-5211 Engine, diesel, Gen Mtrs mod 6-110, 9 Dec 55

LUBE ORDERS

5-9477 Air condition unit, Typhoon mod SA-500, 2 Feb 55

5-2049 Pump, centrif, fire trk mtd, Darley mod F-300, 27 Jan 55

5-5062 Compressor, air, 60-cfm, Schramm mod 60 (Skid Mtd), 27 Jan 55

5-5063 Compressor, air, 60-cfm, Schramm mod 60 (Base Mtd), 27 Jan 55

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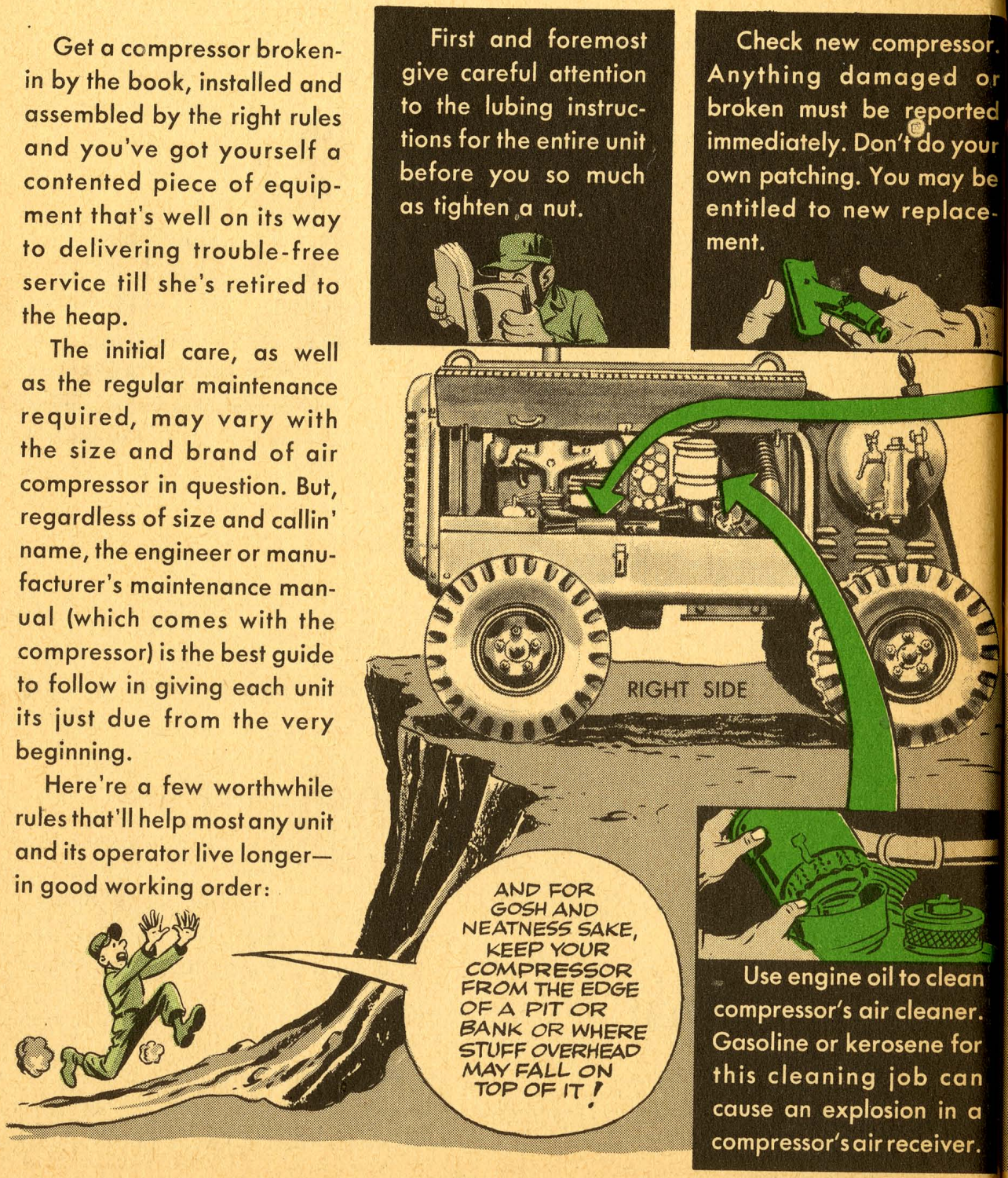
PUT YOUR CONFIDENCE IN AN AIR COMPRESSOR

Get a compressor broken-in by the book, installed and assembled by the right rules and you've got yourself a contented piece of equipment that's well on its way to delivering trouble-free service till she's retired to the heap.

The initial care, as well as the regular maintenance required, may vary with the size and brand of air compressor in question. But, regardless of size and callin' name, the engineer or manufacturer's maintenance manual (which comes with the compressor) is the best guide to follow in giving each unit its just due from the very beginning.

Here're a few worthwhile rules that'll help most any unit and its operator live longer—in good working order:



PUT YOUR CONFIDENCE IN AN AIR COMPRESSOR FOR KEEPS.

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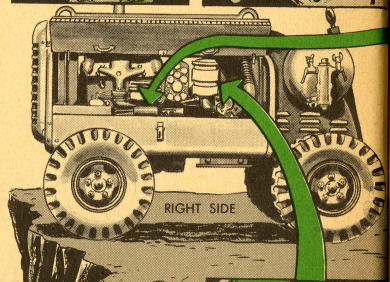
Here're a few worthwhile rules that'll help most any unit and its operator live longer—in good working order:

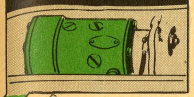
First and foremost give careful attention to the lubing instructions for the entire unit before you so much as tighten a nut.

Check new compressor. Anything damaged or broken must be reported immediately. Don't do your own patching. You may be entitled to new replacement.



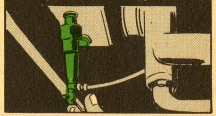
Use engine oil to clean compressor's air cleaner. Gasoline or kerosene for this cleaning job can cause an explosion in a compressor's air receiver.

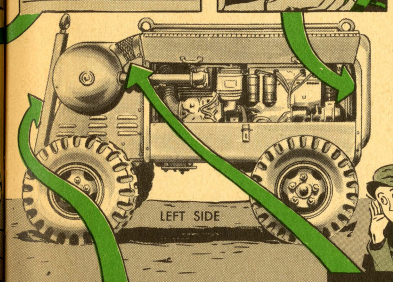
A compressor's cranking motor must not be operated over the recommended limit—usually 30 seconds.



Before starting engine make sure fire extinguisher has a full charge, is in good working order and in its appointed spot.

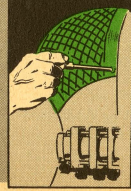
Never start an air compressor before checking the safety valves. An automatic unloader pilot is set and sealed at factory . . . Don't monkey with it. It could be very nasty should its safety valves get accidentally damaged or plugged and fail to unload air tank pressure as they should.





Keep alert for unusual sounds and smells during operation. Make necessary checks for trouble by the book. Correct faults immediately if possible, otherwise report 'em to the right people.

When you refuel (away from open flame and with the engine off, of course) keep the funnel in contact with metal fuel tank. Electrical sparks in the neighborhood can mix with gas vapors and make horrible music together.



Swear in blood that while unit is operating you'll never remove guards, shields or fittings. Also, that you'll faithfully observe any special maintenance cautions labeled on your compressor.

IN FOR KEEPS.

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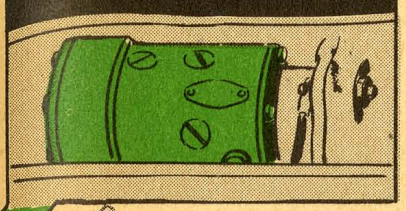

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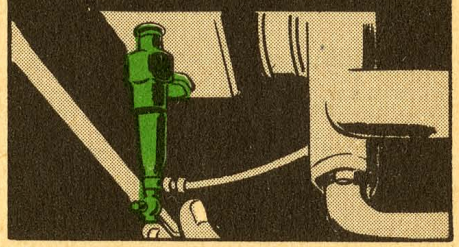

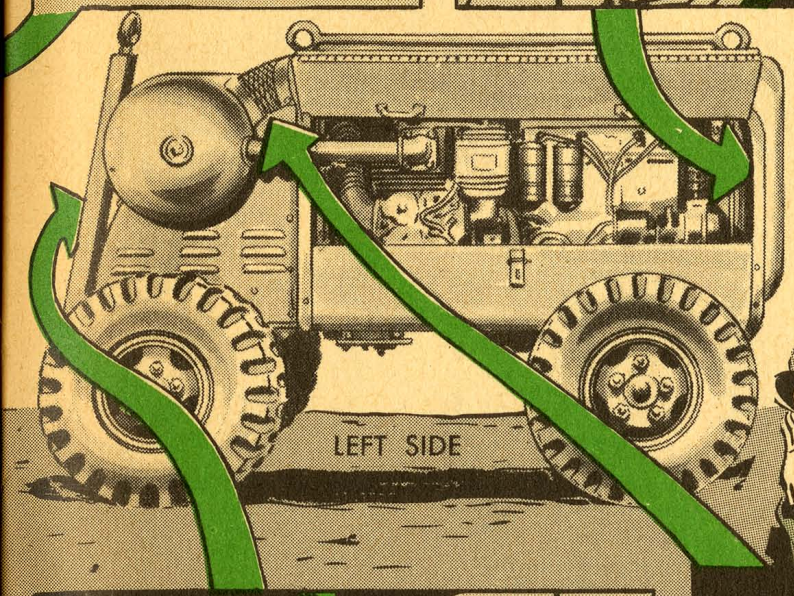

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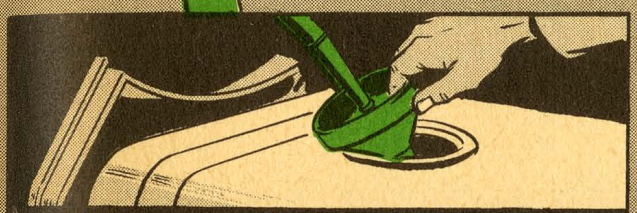

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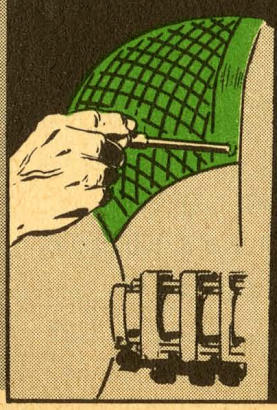

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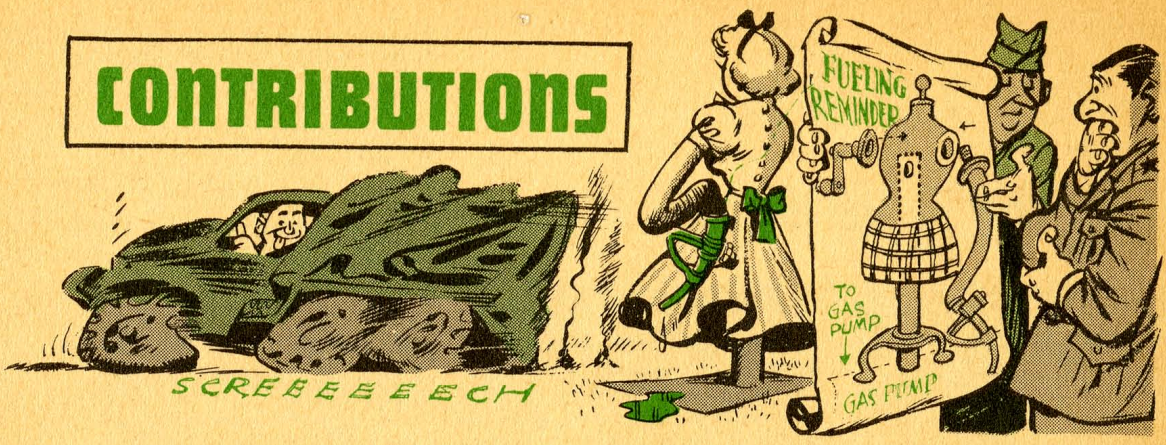
CONTRIBUTIONS

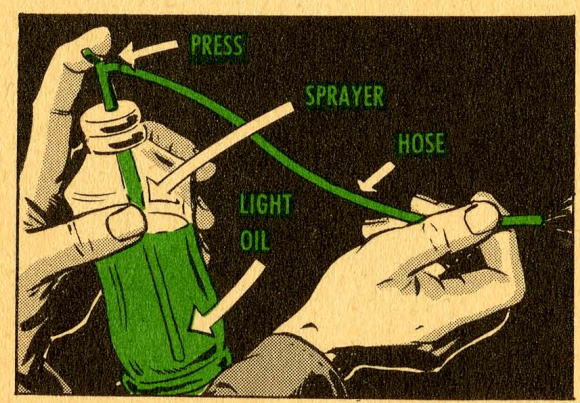


SHORT SNORTER

Dear Editor,

Here's a little idea I use to get light oil into difficult places—a bottle sprayer with a small hose attached.

Sgt W. O'N



(Ed Note—Good idea if you have the bottle sprayer. Otherwise you can put the small hose over the end of your pistol oiler or squirt oil can.)

PROTECT YOUR GASKETS

Dear Editor,

Those disk support gaskets on the inside of the acquisition radome (M33 fire-control system) really take a beating when the cover is removed or replaced. They stick to the radome and get the L torn out of 'em. Here's how we prevent it:

We take off the end covers and boost one of our small men up so he can screw the disk supports away from the radome. We tighten 'em back up the same way when we replace the radome.

A. Gleaton
Fort Belvoir, Va.

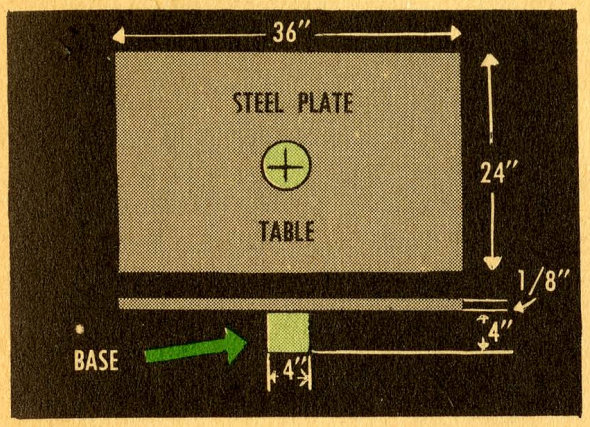
(Ed Note—Great—as long as you have a small man handy. Try putting some talcum powder on those gaskets the next time. It'll keep 'em from sticking.)

ACQUISITION TABLE

Dear Editor,

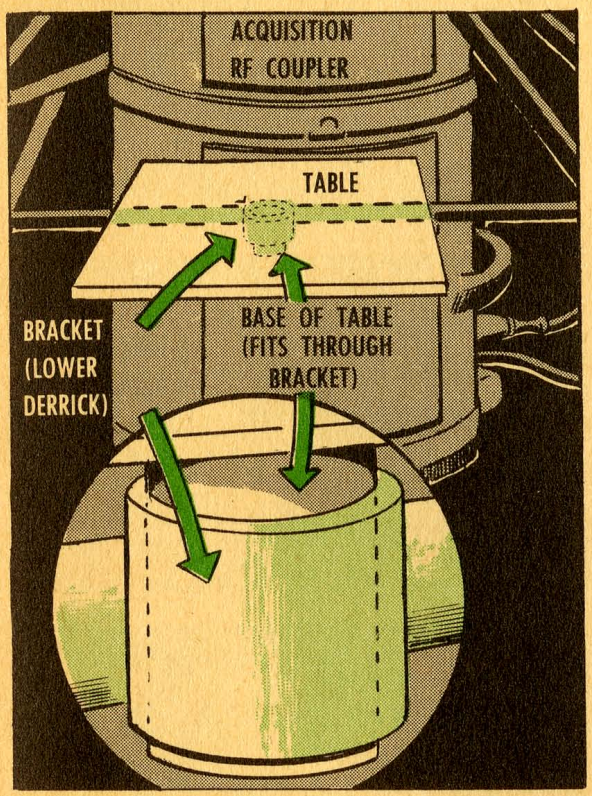
Here's a table we've found to be very handy for holding the frequency meter, oscilloscope, etc., when we're working on the acquisition RF unit. It's made of 1/8-in steel plate, 2 feet wide and 3 feet long. A piece of 4-in pipe 4 inches long is welded in the center.

To use the table we just put on the lower derrick bracket and slip the pipe extension down into it. 'Course, we



primed the table and pipe and finished them with OD paint.

Wm. A. Frazier, Jr.
Aberdeen Proving Ground, Md.



(Ed Note—Now that's a real able table! If you could scrounge up a piece of plywood and use a wooden extension, you'd have about the same strength but a lot less weight.)

KNUCKLE SAVER

Dear Editor,

The wheel-bearing nut wrench that comes in the vehicle tool set for the M37 3/4-ton truck can sure draw knuckle blood. The long metal rod handle fits into the wrench head easily enough, but it takes a lot of maneuvering and care to adjust your grip with every turn so's not to hit the fender or be stopped by the ground.

Here's how we cured that knuckle buster.

The fix: A round piece of scrap metal welded to the outside end of the wrench head. A 3/4-in bolt-head welded to the center of the round piece to take a 3/4-in socket wrench.

By adding extensions to a ratchet wrench we have a handle for the nut remover that gives us turning room away from the fender and the ground and saves bruised knuckles.

The Signal Bn Motor Pool

(Ed Note—Your treatment of the wrench for the M37, 3/4-ton truck seems like the long way around and is not recommended. If you'll just insert

the 30-in turning handle half-way thru the wrench you'd have enough room to clear the fender and ground, plus have enough leverage for torque requirements.)

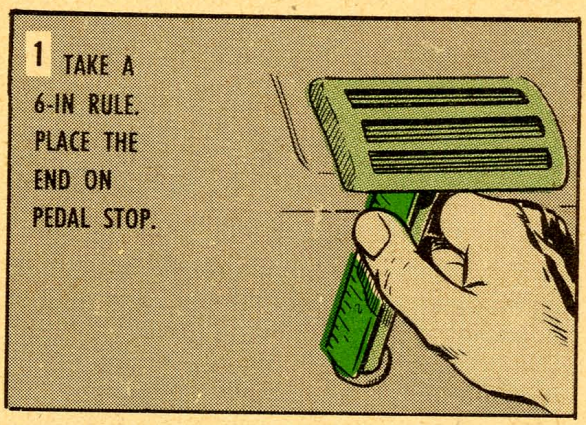
FOOLPROOF FREE-PLAY

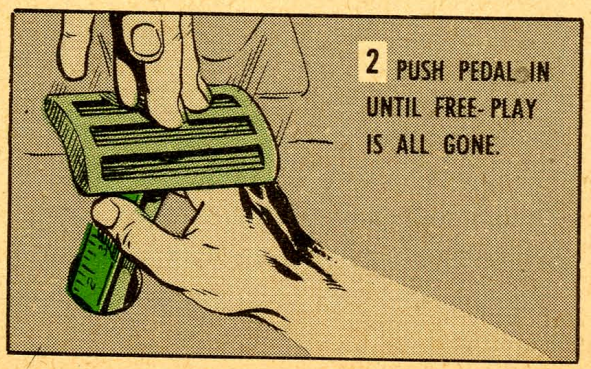
Dear Editor,

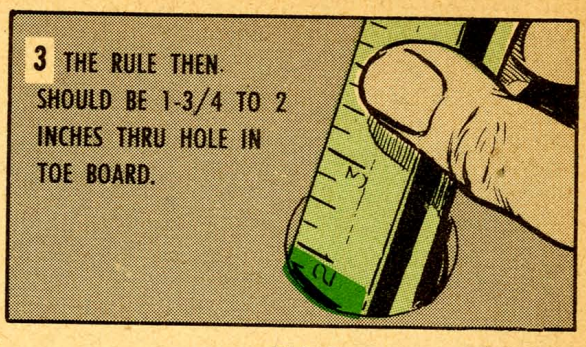
Watched several fellas check the clutch pedal free-travel on their 5-tonners. They used a 3-ft folding rule for the job. They placed one end of the rule on the toe board and ran the rule up along the pedal shaft to the pedal pad.

This kind of measuring is inaccurate because you have to remember two figures, and then subtract one from another.

To get a true reading easier I suggest using a 6-in rule. Place the 1-in end of the rule on the pedal stop (grommet) which is attached to the pedal shaft. Push the pedal in until the free-play is all gone (release-bearing contacts the release levers). The rule then should be 1-3/4 to 2 inches thru the hole in the toe board. This same method can be used on other trucks.

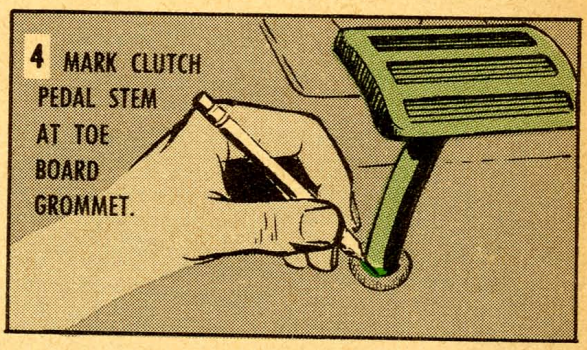


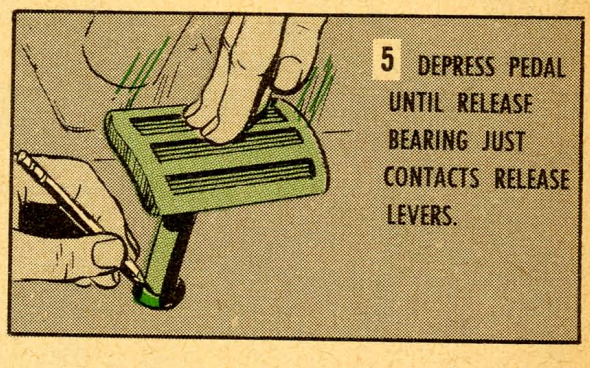


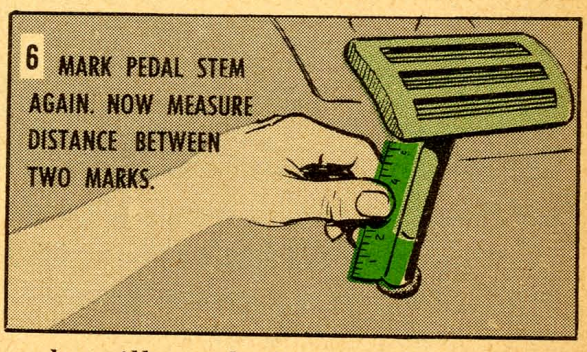


CWO G. W. Schmidt
Aberdeen Proving Ground, Md.

(Ed Note—To get a true reading, measurements should be made like in TM-9-837, Fig 44 and change 3. Another way is to—







and you'll get the free pedal play.)

Hey, there—

You with the M42's. Didn't you read "Fuel Filter Flush" on page 19 of PS #29? Keep hearing guys're goofing—not flushing that filter every day like it says. Lets water collect in the drain-valve line, freeze, bust the line (or separate the hose from the steel tubing), spill gas in the hull. Watch that stuff, huh? Wanta cook on the **rear** burner? (You'll see the word on this in the next revision of the TM.)

Anybody seen Rube?

Ever heard the story of the private
named Rube,
Who stacked his bazooka and dented
the tube?
The dent held the next round firmly
in place,
And away went the launcher, like a jet-
propelled ace.
It hit the dirt with a terrific roar.
Ain't much of Rube around any more.

No bonfires, bub!

The space around the mufflers on your tank is no place for kindling. In normal operation those muffler shields get hot enough to set off most anything that'll burn. Keep 'em clear of debris and you'll avoid unscheduled fires.

Goose gotta go

Good idea to keep a civil foot in your boot when it's on the accelerator of that medium tank. Guys goosing the throttle too fast don't help the life of the oil-cooler-fan drive-shafts. Easy does it, hey?

So there you are

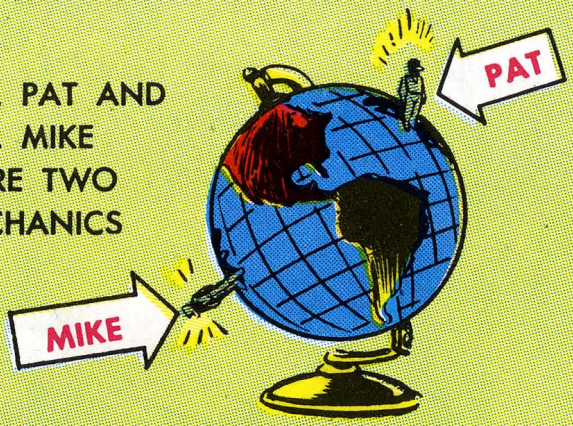
Heading the list of sins you may have committed on optical equipment is screwing around with delicate parts when you know you're not supposed to. So curb your ambition to be an optician to tinker with lenses and such. Give Ordnance a call and leave it to them. They've got the tools that're needed—and the touch.

Watch that ammo

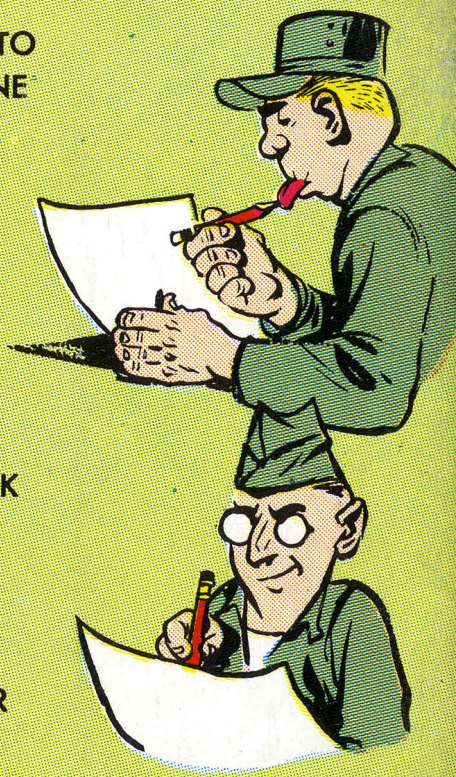
Some guys'll never learn, it seems like. They're the ones who forget to put in that special crimped grenade cartridge instead of regular ball ammo when firing off rifle grenades. Tie a string on your finger, if need be, to remind you to use that special ammo for those rifle grenades. Regular ball ammo'll blow that grenade up—right in your face.

EVER HEAR THE ONE ABOUT PAT AND MIKE ?

PVT. PAT AND PVT. MIKE WERE TWO MECHANICS



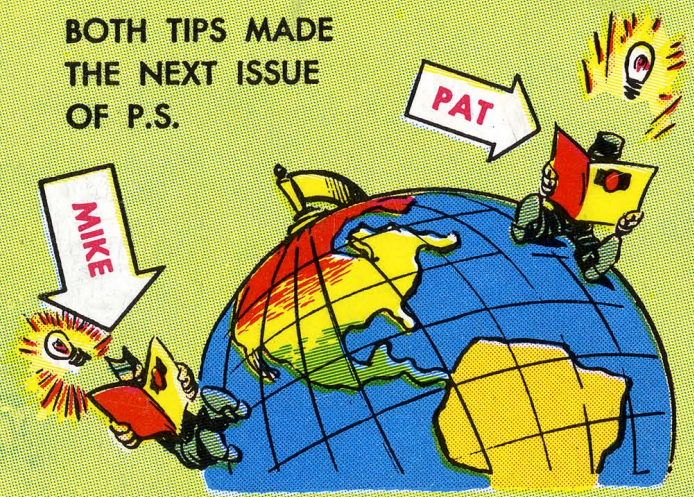
PAT WROTE TO P.S. MAGAZINE ABOUT A PROBLEM FIXING A WIGGLING WASHER



HE ALSO INCLUDED A TIP ON HOW TO FIX A SLIPPING SHAFT

MEANWHILE, MIKE WAS WRITING TO ASK ABOUT A SLIPPING SHAFT, ALSO INCLUDED A TIP ON HOW TO FIX A WIGGLING WASHER

BOTH TIPS MADE THE NEXT ISSUE OF P.S.



...YEP...YOU GUESSED IT. BOTH READ THE TIPS IN P.S.... SOLVED THEIR PROBLEM AND GOT THAT STRIPE THEY WERE BUCKING FOR.

TAKE ANOTHER TIP FROM PAT AND MIKE...SEND YOUR GOOD IDEAS TO SGT HALF MAST OR SGT DOZER, PS MAGAZINE, RARITAN ARSENAL, METUCHEN, N. J.